

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Avi Ashkenazi, et al. Serial No.: Filed herewith Filed: Herewith For: <i>Secreted and Transmembrane Polypeptides and Nucleic Acids Encoding the Same</i>	Group Art Unit: Not yet assigned Examiner: Not yet assigned Express Mail No: EL 895 375 467 US Mailed: November 15, 2001
---	---

CERTIFICATE RE: SEQUENCE LISTINGRESPONSE UNDER 37 CFR § 1.821(f) and (g)

Box: Patent Application
 Assistant Commissioner of Patents
 Washington, D.C. 20231

Sir:

I hereby state that the Sequence Listing submitted herewith is submitted in paper copy and a computer-readable diskette, and that the information recorded in computer readable form is identical to the written sequence listing. I further state that this submission includes no new matter.

Respectfully submitted,

GENENTECH, INC.

By: *Elizabeth M. Barnes*
 Elizabeth M. Barnes, Ph.D.
 Reg. No. 35,059
 Telephone No. (650) 225-4563



09157

PATENT TRADEMARK OFFICE

Sequence Listing

<110> Avi J. Ashkenazi
Kevin P. Baker
David A. Botstein
Luc Desnoyers
Dan L. Eaton
Napoleone Ferrara
Sherman Fong
Wei-Qiang Gao
Hanspeter Gerber
Mary E. Gerritsen
Audrey Goddard
Paul J. Godowski
Austin L. Gurney
Ivar J. Kljavin
Jennie P. Mather
Mary A. Napier
James Pan
Nicholas F. Paoni
Margaret Ann Roy
Timothy A. Stewart
Daniel Tumas
Colin K. Watanabe
P.Mickey Williams
William I. Wood
Zemin Zang

<120> SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC ACIDS ENCODING THE SAME

<130> P3130R1C1

<150> 60/056974
<151> 1997-08-26

<150> 60/059115
<151> 1997-09-17

<150> 60/059263
<151> 1997-09-18

<150> 60/059588
<151> 1997-09-17

<150> 60/062285
<151> 1997-10-17

<150> 60/062816
<151> 1997-10-24

<150> 60/063082
<151> 1997-10-31

<150> 60/063329
<151> 1997-10-27

<150> 60/063733

<151> 1997-10-29

<150> 60/066364
<151> 1997-11-21

<150> 60/066840
<151> 1997-11-25

<150> 60/069694
<151> 1997-12-16

<150> 60/074086
<151> 1998-02-09

<150> 60/074092
<151> 1998-02-09

<150> 60/079294
<151> 1998-03-25

<150> 60/081049
<151> 1998-04-08

<150> 60/095998
<151> 1998-08-10

<150> 60/097000
<151> 1998-08-18

<150> 60/099601
<151> 1998-09-09

<150> 60/099803
<151> 1998-09-10

<150> 60/099811
<151> 1998-09-10

<150> 60/099812
<151> 1998-09-10

<150> 60/100858
<151> 1998-09-17

<150> 60/101922
<151> 1998-09-24

<150> 60/106032
<151> 1998-10-28

<150> 60/109304
<151> 1998-11-20

<150> 60/125778
<151> 1999-03-23

<150> 60/139695
<151> 1999-06-15

<150> 60/145070
<151> 1999-07-20

<150> 60/145698
<151> 1999-07-26

<150> 60/149396
<151> 1999-08-17

<150> 60/169495
<151> 1999-12-07

<150> 08/918874
<151> 1997-08-26

<150> 08/933821
<151> 1997-09-19

<150> 08/960507
<151> 1997-10-29

<150> 09/114844
<151> 1998-07-14

<150> 09/136801
<151> 1998-08-19

<150> 09/136804
<151> 1998-08-19

<150> 09/136828
<151> 1998-08-19

<150> 09/158342
<151> 1998-09-21

<150> 09/180997
<151> 1998-09-10

<150> 09/202088
<151> 1998-12-08

<150> 09/254311
<151> 1999-03-03

<150> 09/254460
<151> 1999-03-09

<150> 09/254465
<151> 1999-03-05

<150> 09/284663
<151> 1999-04-15

<150> 09/332928
<151> 1999-06-14

<150> 09/332929

<151> 1999-06-14

<150> 09/333075
<151> 1999-06-14

<150> 09/333077
<151> 1999-06-14

<150> 09/380137
<151> 1999-08-25

<150> 09/380138
<151> 1999-08-25

<150> 09/380139
<151> 1999-08-25

<150> 09/403296
<151> 1999-10-18

<150> 09/403297
<151> 1999-10-18

<150> 09/423741
<151> 1999-11-10

<150> 09/423844
<151> 1999-11-12

<150> 09/522342
<151> 2000-03-09

<150> 09/548815
<151> 2000-04-13

<150> 09/664610
<151> 2000-09-18

<150> 09/665350
<151> 2000-09-18

<150> 09/709238
<151> 2000-11-08

<150> 09/767609
<151> 2001-01-22

<150> 09/802706
<151> 2001-03-09

<150> 09/808689
<151> 2001-03-14

<150> 09/866028
<151> 2001-05-25

<150> 09/870574
<151> 2001-05-30

<150> 09/872035
<151> 2001-06-01

<150> 09/886342
<151> 2001-06-19

<150> PCT/US98/14552
<151> 1998-07-14

<150> PCT/US98/18824
<151> 1998-09-10

<150> PCT/US98/19093
<151> 1998-09-14

<150> PCT/US98/19330
<151> 1998-09-16

<150> PCT/US98/19437
<151> 1998-09-17

<150> PCT/US98/24855
<151> 1998-11-20

<150> PCT/US98/25108
<151> 1998-12-01

<150> PCT/US98/25190
<151> 1998-11-25

<150> PCT/US99/05028
<151> 1999-03-08

<150> PCT/US99/12252
<151> 1999-06-02

<150> PCT/US99/20111
<151> 1999-09-01

<150> PCT/US99/20594
<151> 1999-09-08

<150> PCT/US99/21090
<151> 1999-09-15

<150> PCT/US99/21547
<151> 1999-09-15

<150> PCT/US99/28301
<151> 1999-12-01

<150> PCT/US99/28313
<151> 1999-11-30

<150> PCT/US99/28565
<151> 1999-12-02

<150> PCT/US99/30999

<151> 1999-12-20

<150> PCT/US00/00219
<151> 2000-01-05

<150> PCT/US00/04341
<151> 2000-02-18

<150> PCT/US00/04342
<151> 2000-02-18

<150> PCT/US00/04414
<151> 2000-02-22

<150> PCT/US00/05601
<151> 2000-03-01

<150> PCT/US00/05841
<151> 2000-03-02

<150> PCT/US00/06471
<151> 2000-03-09

<150> PCT/US00/07377
<151> 2000-03-20

<150> PCT/US00/08439
<151> 2000-03-30

<150> PCT/US00/13358
<151> 2000-05-15

<150> PCT/US00/13705
<151> 2000-05-17

<150> PCT/US00/14042
<151> 2000-05-22

<150> PCT/US00/14941
<151> 2000-05-30

<150> PCT/US00/15264
<151> 2000-06-02

<150> PCT/US00/22031
<151> 2000-08-11

<150> PCT/US00/23328
<151> 2000-08-24

<150> PCT/US00/23522
<151> 2000-08-23

<150> PCT/US00/32678
<151> 2000-12-01

<150> PCT/US01/06520
<151> 2001-02-28

<150> PCT/US01/17443
<151> 2001-05-30

<150> PCT/US01/17800
<151> 2001-06-01

<150> PCT/US01/19692
<151> 2001-06-20

<150> PCT/US01/21066
<151> 2001-06-29

<150> PCT/US01/21735
<151> 2001-04-09

<160> 151

<210> 1
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 1
tgtaaaacga cggccagttt aatagacctg caattattaa tct 43

<210> 2
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 2
cagaaaaacag ctatgaccac ctgcacacact gcaaattccat t 41

<210> 3
<211> 2290
<212> DNA
<213> Homo Sapien

<400> 3
ggctgagggg aggccccggag cttttctgggg gcctggggga tccttttgca 50
ctgggtgggtg gagagaagcg cctgcagcca accagggtca ggctgtgctc 100
acagtttctt ctggcgcat gtaaaggctc cacaaaggag ttgggagttc 150
aaatgaggct gctgcggacg gcctgaggat ggaccccaag ccctggacct 200
gccgagcggtg gcactgaggc agcggctgac gctactgtga gggaaagaag 250
gttgtgagca gccccgcagg acccctggcc agccctggcc ccagcctctg 300
ccggagccct ctgtggaggc agagccagtg gagcccagtg aggcagggtc 350

gcttggcagc caccggcctg caactcagga acccctccag aggccatgga 400
caggctgccc cgctgacggc cagggtgaag catgtgagga gccgccccgg 450
agccaagcag gagggaaagag gcttcatacg attctattca caaagaataa 500
ccaccatTTT gcaaggacca tgaggccact gtgcgtgaca tgctggtggc 550
tcggactgct ggctgcoatg ggagctgttg cagggcagga ggacggttt 600
gagggcactg aggagggctc gccaagagag ttcatttacc taaacaggta 650
caagcggcg ggcgagtccc aggacaagtg cacctacacc ttcattgtgc 700
cccagcagcg ggtcacgggt gccatctgcg tcaactccaa ggagcctgag 750
gtgcttctgg agaaccgagt gcataaggcag gagctagagc tgctcaacaa 800
ttagctgctc aagcagaagc ggcagatcga gacgctgcag cagctggtgg 850
aggtggacgg cggcattgtg agcgagggtga agctgctgcg caaggagagc 900
cgcaacatga actcgcgggt cacgcagctc tacatgcagc tcctgcacga 950
gatcatccgc aagcgggaca acgcgttgg a gctctccag ctggagaaca 1000
ggatcctgaa ccagacagcc gacatgctgc agctggccag caagtacaag 1050
gacctggagc acaagtacca gcacctggcc acactggccc acaaccaatc 1100
agagatcatc ggcgcagttg aggagcactg ccagagggtg ccctcggcca 1150
ggcccggtccc ccagccaccc cccgctgccc cgcccccgggt ctaccaacca 1200
cccacctaca accgcacatcat caaccagatc tctaccaacg agatccagag 1250
tgaccagaac ctgaagggtgc tgccacccccc tctgccact atgcccactc 1300
tcaccagcct cccatcttcc accgacaagc cgtcggggcc atggagagac 1350
tgcctgcagg ccctggagga tggccacgac accagctcca tctacctgg 1400
gaagccggag aacaccaacc gcctcatgca ggtgtggtgc gaccagagac 1450
acgaccccccgg gggctggacc gtcatccaga gacgcctgga tggctctgtt 1500
aacttcttca ggaactggga gacgtacaag caagggtttg ggaacattga 1550
cggcgaatac tggctgggcc tggagaacat ttactggctg acgaaccaag 1600
gcaactacaa actcctggtg accatggagg actggtccgg ccgc当地agtc 1650
tttgcagaat acgccagttt ccgcctggaa cctgagagcg agtattataa 1700
gctgcggctg gggcgctacc atggcaatgc gggtgactcc tttacatggc 1750
acaacggcaa gcagttcacc accctggaca gagatcatga tgtctacaca 1800

ggaaaactgtg cccactacca gaagggaggc tggtgtata acgcctgtgc 1850
ccactccaac ctcaacgggg tctggtaccg cggggggccat taccggagcc 1900
gctaccagga cggagtctac tgggctgagt tccgaggagg ctcttactca 1950
ctcaagaaag tggtgatgat gatccgaccg aaccccaaca cttccacta 2000
agccagctcc ccctcctgac ctctcggtgc cattgccagg agcccacct 2050
ggtcacgctg gccacagcac aaagaacaac tcctcaccag ttcatcctga 2100
ggctgggagg accggatgc tggattctgt tttccgaagt cactgcagcg 2150
gatgatggaa ctgaatcgat acggtgtttt ctgtccctcc tactttcctt 2200
cacaccagac agcccctcat gtctccagga caggacagga ctacagacaa 2250
ctcttcttt aaataaaatta agtctctaca ataaaaaaaaa 2290

<210> 4
<211> 493
<212> PRT
<213> Homo Sapien

<400> 4
Met Arg Pro Leu Cys Val Thr Cys Trp Trp Leu Gly Leu Leu Ala
1 5 10 15
Ala Met Gly Ala Val Ala Gly Gln Glu Asp Gly Phe Glu Gly Thr
20 25 30
Glu Glu Gly Ser Pro Arg Glu Phe Ile Tyr Leu Asn Arg Tyr Lys
35 40 45
Arg Ala Gly Glu Ser Gln Asp Lys Cys Thr Tyr Thr Phe Ile Val
50 55 60
Pro Gln Gln Arg Val Thr Gly Ala Ile Cys Val Asn Ser Lys Glu
65 70 75
Pro Glu Val Leu Leu Glu Asn Arg Val His Lys Gln Glu Leu Glu
80 85 90
Leu Leu Asn Asn Glu Leu Leu Lys Gln Lys Arg Gln Ile Glu Thr
95 100 105
Leu Gln Gln Leu Val Glu Val Asp Gly Gly Ile Val Ser Glu Val
110 115 120
Lys Leu Leu Arg Lys Glu Ser Arg Asn Met Asn Ser Arg Val Thr
125 130 135
Gln Leu Tyr Met Gln Leu Leu His Glu Ile Ile Arg Lys Arg Asp
140 145 150
Asn Ala Leu Glu Leu Ser Gln Leu Glu Asn Arg Ile Leu Asn Gln
155 160 165

Thr Ala Asp Met Leu Gln Leu Ala Ser Lys Tyr Lys Asp Leu Glu
 170 175 180
 His Lys Tyr Gln His Leu Ala Thr Leu Ala His Asn Gln Ser Glu
 185 190 195
 Ile Ile Ala Gln Leu Glu Glu His Cys Gln Arg Val Pro Ser Ala
 200 205 210
 Arg Pro Val Pro Gln Pro Pro Pro Ala Ala Pro Pro Arg Val Tyr
 215 220 225
 Gln Pro Pro Thr Tyr Asn Arg Ile Ile Asn Gln Ile Ser Thr Asn
 230 235 240
 Glu Ile Gln Ser Asp Gln Asn Leu Lys Val Leu Pro Pro Pro Leu
 245 250 255
 Pro Thr Met Pro Thr Leu Thr Ser Leu Pro Ser Ser Thr Asp Lys
 260 265 270
 Pro Ser Gly Pro Trp Arg Asp Cys Leu Gln Ala Leu Glu Asp Gly
 275 280 285
 His Asp Thr Ser Ser Ile Tyr Leu Val Lys Pro Glu Asn Thr Asn
 290 295 300
 Arg Leu Met Gln Val Trp Cys Asp Gln Arg His Asp Pro Gly Gly
 305 310 315
 Trp Thr Val Ile Gln Arg Arg Leu Asp Gly Ser Val Asn Phe Phe
 320 325 330
 Arg Asn Trp Glu Thr Tyr Lys Gln Gly Phe Gly Asn Ile Asp Gly
 335 340 345
 Glu Tyr Trp Leu Gly Leu Glu Asn Ile Tyr Trp Leu Thr Asn Gln
 350 355 360
 Gly Asn Tyr Lys Leu Leu Val Thr Met Glu Asp Trp Ser Gly Arg
 365 370 375
 Lys Val Phe Ala Glu Tyr Ala Ser Phe Arg Leu Glu Pro Glu Ser
 380 385 390
 Glu Tyr Tyr Lys Leu Arg Leu Gly Arg Tyr His Gly Asn Ala Gly
 395 400 405
 Asp Ser Phe Thr Trp His Asn Gly Lys Gln Phe Thr Thr Leu Asp
 410 415 420
 Arg Asp His Asp Val Tyr Thr Gly Asn Cys Ala His Tyr Gln Lys
 425 430 435
 Gly Gly Trp Trp Tyr Asn Ala Cys Ala His Ser Asn Leu Asn Gly
 440 445 450
 Val Trp Tyr Arg Gly Gly His Tyr Arg Ser Arg Tyr Gln Asp Gly

455 460 465

Val Tyr Trp Ala Glu Phe Arg Gly Gly Ser Tyr Ser Leu Lys Lys
470 475 480

Val Val Met Met Ile Arg Pro Asn Pro Asn Thr Phe His
485 490

<210> 5
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 5
gctgacgaac caaggcaact acaaactcct ggt 33

<210> 6
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 6
tgccggccga ccagtcctcc atggcacca ggagttgtt g 41

<210> 7
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 7
ggtgtgaac tgcttgcgt tgcgtcatgt aaa 33

<210> 8
<211> 1218
<212> DNA
<213> Homo Sapien

<400> 8
cccacgcgtc cggcgccgtg gcctcggtc catcttgcc gttctctcg 50
acctgtcaca aaggagtcgc gccggccggc cggccccctc cctccgggtgg 100
gcccgagg tagagaaagt cagtgcaca gcccggaccgc gctgctctga 150
gcctggca cgccggaaacgg gagggaggtct gaggggtggg gacgtctgtg 200
agggaggggaa acagccgctc gagcctgggg cggggggacc ggactggggc 250
cggggtaggc tctggaaagg gcccgggaga gaggtggcgt tggtcagaac 300

ctgagaaaca gccgagaggt tttccaccga ggcccgcgt tgagggatct 350
gaagagggttc ctagaagagg gtgttccctc ttccgggggt cctcaccaga 400
agagggtctt ggggtcgcc ctctgagga ggctgcggct aacagggccc 450
agaactgccca ttggatgtcc agaatcccct gtagttgata atgttggaa 500
taagctctgc aactttctt ggcattcagt tgttaaaaac aaataggatg 550
caaattcctc aactccaggt tatgaaaaca gtacttgaa aactgaaaac 600
tacctaaatg atcgtcttg gttggccgt gttcttagcg agcagaagcc 650
ttgccaggg tctgttgtt actctcgaag agcacatagc ccacttccta 700
gggactggag gtgccgtac taccatgggt aattcctgta tctgccgaga 750
tgacagtgga acagatgaca gtgttgacac ccaacagcaa caggccgaga 800
acagtgcagt acccactgct gacacaagga gccaaccacg ggaccctgtt 850
cggccaccaa ggaggggccc aggacctcat gagccaagga gaaagaaaaca 900
aaatgtggat gggctagtgt tggacacact ggcagtaata cgactcttg 950
tagataagta agtatctgac tcacggtcac ctccagtgga atgaaaagtg 1000
ttctgccccgg aaccatgact ttaggactcc ttcaagtccct ttaggacata 1050
ctcgccaagc cttgtgctca cagggcaaag gagaatattt taatgctccg 1100
ctgatggcag agtaaatgat aagatttgat gttttgctt gctgtcatct 1150
actttgtctg gaaatgtcta aatgtttctg tagcagaaaa cacgataaag 1200
ctatgatctt tattagag 1218

<210> 9
<211> 117
<212> PRT
<213> Homo Sapien

<400> 9
Met Ile Val Phe Gly Trp Ala Val Phe Leu Ala Ser Arg Ser Leu
1 5 10 15
Gly Gln Gly Leu Leu Leu Thr Leu Glu Glu His Ile Ala His Phe
20 25 30
Leu Gly Thr Gly Gly Ala Ala Thr Thr Met Gly Asn Ser Cys Ile
35 40 45
Cys Arg Asp Asp Ser Gly Thr Asp Asp Ser Val Asp Thr Gln Gln
50 55 60
Gln Gln Ala Glu Asn Ser Ala Val Pro Thr Ala Asp Thr Arg Ser
65 70 75

Gln Pro Arg Asp Pro Val Arg Pro Pro Arg Arg Gly Arg Gly Pro
80 85 90

His Glu Pro Arg Arg Lys Lys Gln Asn Val Asp Gly Leu Val Leu
95 100 105

Asp Thr Leu Ala Val Ile Arg Thr Leu Val Asp Lys
110 115

<210> 10
<211> 1231
<212> DNA
<213> Homo Sapien

<400> 10
cccacgcgtc cgcgcaagtgc cgcaaggctcg cctccgcctg ccagtctcgc 50
ccgcgatccc ggcccggggc tggggcgatcg actccgaccc aggcagccag 100
cagccccgcgc gggagccgga ccgcccgcgg aggagctcg acggcatgct 150
gagccccctc ctttgctgaa gcccgagtgc ggagaagccc gggcaaacgc 200
aggctaagga gaccaaagcg gcgaagtcgc gagacagcgg acaagcagcg 250
gaggagaagg aggaggaggc gaacccagag agggggcagca aaagaagcgg 300
tggtggtggg cgtcgtggcc atggcggcgg ctatgccag ctcgctcatc 350
cgtcagaaga ggcaagcccc cgagcgcgag aaatccaacg cctgcaagtgc 400
tgtcagcagc cccagcaaag gcaagaccag ctgcgacaaaa aacaagttaa 450
atgtcttttc cgggtcaaaa ctttcggct ccaagaagag ggcagaaga 500
agaccagagc ctcagctaa ggtatagtt accaagctat acagccgaca 550
aggctaccac ttgcagctgc aggccgtgg aaccattgtat ggcaccaaaag 600
atgaggacag cacttacact ctgttaacc tcattccctgt gggtctgcga 650
gtgggtggcta tccaaggagt tcaaaccaag ctgtacttgg caatgaacag 700
tgagggatac ttgtacacct cggactttt cacacctgag tgcaaattca 750
aagaatcagt gtttggaaat tattatgtga catattcatc aatgatatac 800
cgtcagcagc agtcaggccg aggggtggat ctgggtctga acaaagaagg 850
agagatcatg aaaggcaacc atgtgaagaa gaacaagcct gcaagctatt 900
ttctgcctaa accactgaaa gtggccatgt acaaggagcc atcactgcac 950
gatctcacgg agttctcccg atctggaaagc gggaccccaa ccaagagcag 1000
aagtgtctct ggcgtgctga acggaggcaa atccatgagc cacaatgaat 1050
caacgttagcc agtgaggggca aaagaaggcc tctgtaacag aaccttaccc 1100

ccaggtgctg ttgaattctt ctagcagtcc ttcacccaaa agttcaaatt 1150
tgtcagtgac atttaccaaa caaacaggca gagttcacta ttctatctgc 1200
cattagacct tccttatcatc catactaaag c 1231

<210> 11
<211> 245
<212> PRT
<213> Homo Sapien

<400> 11
Met Ala Ala Ala Ile Ala Ser Ser Leu Ile Arg Gln Lys Arg Gln
1 5 10 15
Ala Arg Glu Arg Glu Lys Ser Asn Ala Cys Lys Cys Val Ser Ser
20 25 30
Pro Ser Lys Gly Lys Thr Ser Cys Asp Lys Asn Lys Leu Asn Val
35 40 45
Phe Ser Arg Val Lys Leu Phe Gly Ser Lys Lys Arg Arg Arg Arg
50 55 60
Arg Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu Tyr Ser
65 70 75
Arg Gln Gly Tyr His Leu Gln Leu Gln Ala Asp Gly Thr Ile Asp
80 85 90
Gly Thr Lys Asp Glu Asp Ser Thr Tyr Thr Leu Phe Asn Leu Ile
95 100 105
Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Gln Thr Lys
110 115 120
Leu Tyr Leu Ala Met Asn Ser Glu Gly Tyr Leu Tyr Thr Ser Glu
125 130 135
Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe Glu Asn
140 145 150
Tyr Tyr Val Thr Tyr Ser Ser Met Ile Tyr Arg Gln Gln Gln Ser
155 160 165
Gly Arg Gly Trp Tyr Leu Gly Leu Asn Lys Glu Gly Glu Ile Met
170 175 180
Lys Gly Asn His Val Lys Lys Asn Lys Pro Ala Ala His Phe Leu
185 190 195
Pro Lys Pro Leu Lys Val Ala Met Tyr Lys Glu Pro Ser Leu His
200 205 210
Asp Leu Thr Glu Phe Ser Arg Ser Gly Ser Gly Thr Pro Thr Lys
215 220 225
Ser Arg Ser Val Ser Gly Val Leu Asn Gly Gly Lys Ser Met Ser

230

235

240

His Asn Glu Ser Thr
245

<210> 12

<211> 744

<212> DNA

<213> Homo Sapien

<400> 12

atggccgcgg ccatcgctag cggcttgate cgccagaagc ggcaggcg 50
ggagcagcac tgggaccggc cgtctgccag caggaggcgg agcagcccc 100
gcaagaaccc cgggctctgc aacggcaacc tggtgatatat ctctccaaa 150
gtgcgcatct tcggcctcaa gaagcgcagg ttgcggcgcc aagatcccc 200
gctcaagggt atagtgcacca ggttatattt caggcaaggc tactacttgc 250
aaatgcaccc cgatggagct ctcgatggaa ccaaggatga cagcactaat 300
tctacactt tcaacctcat accagtggga ctacgtttt tgccatcca 350
gggagtgaaa acaggggtgt atatagccat gaatggagaa ggttacctct 400
accatcaga acttttacc cctgaatgca agtttaaaga atctgtttt 450
aaaaattatt atgtaatcta ctcatccatg ttgtacagac aacaggaatc 500
tggtagagcc tggttttgg gattaaataa ggaaggcua gctatgaaag 550
ggaacagagt aaagaaaaacc aaaccagcag ctcattttt acccaagcca 600
ttggaagttt ccatgtaccg agaaccatct ttgcatgatg ttggggaaac 650
ggtcccgaaag cctgggggtga cgccaaatgaa aagcacaatg gcgtctgcaa 700
taatgaatgg aggcaaacca gtcaacaaga gtaagacaac atag 744

<210> 13

<211> 247

<212> PRT

<213> Homo Sapien

<400> 13

Met	Ala	Ala	Ala	Ile	Ala	Ser	Gly	Leu	Ile	Arg	Gln	Lys	Arg	Gln
1									10					15
Ala	Arg	Glu	Gln	His	Trp	Asp	Arg	Pro	Ser	Ala	Ser	Arg	Arg	Arg
	20								25					30
Ser	Ser	Pro	Ser	Lys	Asn	Arg	Gly	Leu	Cys	Asn	Gly	Asn	Leu	Val
				35					40					45
Asp	Ile	Phe	Ser	Lys	Val	Arg	Ile	Phe	Gly	Leu	Lys	Lys	Arg	Arg
					50				55					60

Leu	Arg	Arg	Gln	Asp	Pro	Gln	Leu	Lys	Gly	Ile	Val	Thr	Arg	Leu
														75
														75
Tyr	Cys	Arg	Gln	Gly	Tyr	Tyr	Leu	Gln	Met	His	Pro	Asp	Gly	Ala
														90
														90
Leu	Asp	Gly	Thr	Lys	Asp	Asp	Ser	Thr	Asn	Ser	Thr	Leu	Phe	Asn
														105
														105
Leu	Ile	Pro	Val	Gly	Leu	Arg	Val	Val	Ala	Ile	Gln	Gly	Val	Lys
														120
														120
Thr	Gly	Leu	Tyr	Ile	Ala	Met	Asn	Gly	Glu	Gly	Tyr	Leu	Tyr	Pro
														135
														135
Ser	Glu	Leu	Phe	Thr	Pro	Glu	Cys	Lys	Phe	Lys	Glu	Ser	Val	Phe
														150
														150
Glu	Asn	Tyr	Tyr	Val	Ile	Tyr	Ser	Ser	Met	Leu	Tyr	Arg	Gln	Gln
														165
														165
Glu	Ser	Gly	Arg	Ala	Trp	Phe	Leu	Gly	Leu	Asn	Lys	Glu	Gly	Gln
														180
														180
Ala	Met	Lys	Gly	Asn	Arg	Val	Lys	Lys	Thr	Lys	Pro	Ala	Ala	His
														195
														195
Phe	Leu	Pro	Lys	Pro	Leu	Glu	Val	Ala	Met	Tyr	Arg	Glu	Pro	Ser
														210
														210
Leu	His	Asp	Val	Gly	Glu	Thr	Val	Pro	Lys	Pro	Gly	Val	Thr	Pro
														225
														225
Ser	Lys	Ser	Thr	Ser	Ala	Ser	Ala	Ile	Met	Asn	Gly	Gly	Lys	Pro
														240
														240
Val	Asn	Lys	Ser	Lys	Thr	Thr								
245														

<210> 14
<211> 2609
<212> DNA
<213> Homo Sapien

<400> 14
ctgcagccg agcgccggccg gggaaagggtc ctccttccag cgccgagcac 50
tggccctgg cagacgcccc aagattgttg tgaggagtct agccagttgg 100
tgagcgctgt aatctgaacc agctgtgtcc agactgaggc cccatggca 150
ttgttaaca tacttagaaa atgaagtgtt catttttaac attccttcctc 200
caattggttt aatgctgaat tactgaagag ggctaagcaa aaccagggtgc 250
ttgcgctgag ggctctgcag tggctggag gacccggcg ctctccccgt 300
gtcctctcca cgactcgctc gggccctctg gaataaaaaca cccgcgagcc 350

ccgagggccc agaggaggcc gacgtgcccg agtcctccg ggggtccgc 400
ccgcgagctt tcttctcgcc ttgcacatctc ctccctcgcc gccttggaca 450
tgccaggaat aaaaaggata ctcactgtta ccattctggc tctctgttctt 500
ccaagccctg ggaatgcaca ggcacagtgc acgaatggct ttgacctgga 550
tcgcccagtca ggacagtgtt tagatattga tgaatgccga accatccccg 600
aggcctgccc aggagacatg atgtgtgtta accaaaatgg cggttattta 650
tgcattcccc ggacaaaccc tgtgtatcga gggccctact cgaaccctca 700
ctcgacccccc tactcaggtc cgtacccagc agctgccccca ccactctcag 750
ctccaaacta tcccacgatc tccaggcctc ttatatgccc cttggatac 800
cagatggatg aaagcaacca atgtgtggat gtggacgagt gtgcaacaga 850
ttcccaccag tgcaacccca cccagatctg catcaatact gaaggcgggt 900
acacctgctc ctgcacccgac ggatattggc ttctggagg ccagtgccta 950
gacattgatg aatgtcgcta tggttactgc cagcagctct gtgcgaatgt 1000
tcctggatcc tattcttgcata catgcaaccc tggtttacc ctcaatgagg 1050
atggaaggtc ttgccaagat gtgaacgagt gtgccaccga gaaccctgc 1100
gtgcaaacct gcgtcaacac ctacggctct ctcatctgcc gctgtgaccc 1150
aggatatgaa cttgaggaag atggcggtca ttgcagtgtat atggacgagt 1200
gcagcttctc tgagttcctc tgccaaacatg agtgttgaa ccagcccgcc 1250
acatacttct gctcctgccc tccaggctac atcctgctgg atgacaaccc 1300
aagctgcca gacatcaacg aatgtgagca caggaaccac acgtgcaacc 1350
tgcagcagac gtgctacaat ttacaagggg gcttcaaatg catcgacccc 1400
atccgctgtg aggagcctta tctgaggata agtgataacc gctgtatgtg 1450
tcctgctgag aaccctggct gcagagacca gcccttacc atcttgcatt 1500
gggacatgga cgtgggtgtca ggacgctccg ttcccgctga catcttccaa 1550
atgcaagcca cgacccgctc ccctggggcc tattacattt tccagatcaa 1600
atctggaaat gagggcagag aattttacat gcgcaaacg ggccccatca 1650
gtgccaccct ggtgatgaca cgcccccata aaggcccccg gaaaaatccag 1700
ctggacttgg aaatgatcac tgtcaacact gtcataact tcagaggcag 1750
ctccgtgatc cgactgcccata tataatgtgtc gcagtagccca ttctgagcc 1800

cgggctggag cctccgacgc tgccctcat tggcaccaag ggacaggaga 1850
agagaggaaa taacagagag aatgagagcg acacagacgt taggcatttc 1900
ctgctgaacg tttccccaa gagtcagccc cgacttcctg actctcacct 1950
gtactattgc agacctgtca ccctgcagga cttgccaccc ccagttccta 2000
tgacacagtt atcaaaaaagt attatcattt ctccccgtat agaagattgt 2050
tggtaattt tcaaggcctt cagtttattt ccactatttt caaagaaaat 2100
agatttagtt tgcggggc tcagtttatg ttcaaaagact gtgaacagct 2150
tgctgtcact tcttcaccc tcctcacttct tctctcactg tgttactgct 2200
ttgcaaagac ccgggagctg gcggggacc ctgggagtag ctgtttgct 2250
ttttgcgtac acagagaagg ctatgtaaac aaaccacagc aggatcgaag 2300
ggttttaga gaatgtgttt caaaaccatg cctggatttt tcaaccataa 2350
aagaagtttca gtttgtcattt aaatttgtat aacggttaa ttctgtcttg 2400
ttcattttga gtatttttaa aaaatatgtc gtagaattcc ttcaaaaggc 2450
cttcagacac atgctatgtt ctgtttccc aaacctcagtc tcctctccat 2500
tttagccag tgttttctt gaggaccctt taatcttgct ttcttttagaa 2550
tttttaccca attggattgg aatgcagagg tctccaaact gattaaatat 2600
ttgaagaga 2609

<210> 15
<211> 448
<212> PRT
<213> Homo Sapien

<400> 15
Met Pro Gly Ile Lys Arg Ile Leu Thr Val Thr Ile Leu Ala Leu
1 5 10 15
Cys Leu Pro Ser Pro Gly Asn Ala Gln Ala Gln Cys Thr Asn Gly
20 25 30
Phe Asp Leu Asp Arg Gln Ser Gly Gln Cys Leu Asp Ile Asp Glu
35 40 45
Cys Arg Thr Ile Pro Glu Ala Cys Arg Gly Asp Met Met Cys Val
50 55 60
Asn Gln Asn Gly Gly Tyr Leu Cys Ile Pro Arg Thr Asn Pro Val
65 70 75
Tyr Arg Gly Pro Tyr Ser Asn Pro Tyr Ser Thr Pro Tyr Ser Gly
80 85 90

Pro Tyr Pro Ala Ala Ala Pro Pro Leu Ser Ala Pro Asn Tyr Pro
 95 100 105
 Thr Ile Ser Arg Pro Leu Ile Cys Arg Phe Gly Tyr Gln Met Asp
 110 115 120
 Glu Ser Asn Gln Cys Val Asp Val Asp Glu Cys Ala Thr Asp Ser
 125 130 135
 His Gln Cys Asn Pro Thr Gln Ile Cys Ile Asn Thr Glu Gly Gly
 140 145 150
 Tyr Thr Cys Ser Cys Thr Asp Gly Tyr Trp Leu Leu Glu Gly Gln
 155 160 165
 Cys Leu Asp Ile Asp Glu Cys Arg Tyr Gly Tyr Cys Gln Gln Leu
 170 175 180
 Cys Ala Asn Val Pro Gly Ser Tyr Ser Cys Thr Cys Asn Pro Gly
 185 190 195
 Phe Thr Leu Asn Glu Asp Gly Arg Ser Cys Gln Asp Val Asn Glu
 200 205 210
 Cys Ala Thr Glu Asn Pro Cys Val Gln Thr Cys Val Asn Thr Tyr
 215 220 225
 Gly Ser Leu Ile Cys Arg Cys Asp Pro Gly Tyr Glu Leu Glu Glu
 230 235 240
 Asp Gly Val His Cys Ser Asp Met Asp Glu Cys Ser Phe Ser Glu
 245 250 255
 Phe Leu Cys Gln His Glu Cys Val Asn Gln Pro Gly Thr Tyr Phe
 260 265 270
 Cys Ser Cys Pro Pro Gly Tyr Ile Leu Leu Asp Asp Asn Arg Ser
 275 280 285
 Cys Gln Asp Ile Asn Glu Cys Glu His Arg Asn His Thr Cys Asn
 290 295 300
 Leu Gln Gln Thr Cys Tyr Asn Leu Gln Gly Gly Phe Lys Cys Ile
 305 310 315
 Asp Pro Ile Arg Cys Glu Glu Pro Tyr Leu Arg Ile Ser Asp Asn
 320 325 330
 Arg Cys Met Cys Pro Ala Glu Asn Pro Gly Cys Arg Asp Gln Pro
 335 340 345
 Phe Thr Ile Leu Tyr Arg Asp Met Asp Val Val Ser Gly Arg Ser
 350 355 360
 Val Pro Ala Asp Ile Phe Gln Met Gln Ala Thr Thr Arg Tyr Pro
 365 370 375
 Gly Ala Tyr Tyr Ile Phe Gln Ile Lys Ser Gly Asn Glu Gly Arg

380	385	390
Glu Phe Tyr Met Arg Gln Thr Gly Pro Ile Ser Ala Thr Leu Val		
395	400	405
Met Thr Arg Pro Ile Lys Gly Pro Arg Glu Ile Gln Leu Asp Leu		
410	415	420
Glu Met Ile Thr Val Asn Thr Val Ile Asn Phe Arg Gly Ser Ser		
425	430	435
Val Ile Arg Leu Arg Ile Tyr Val Ser Gln Tyr Pro Phe		
440	445	

<210> 16
<211> 2447
<212> DNA
<213> Homo Sapien

<400> 16
cagggtccaaac tgcacacctcg ttcttatcgat tgaattcccc ggggatccctc 50
tagagatccc tcgacacctcg cccacgcgtc cgaacacagg tccttgttgc 100
tgcagagaag cagttgtttt gctggaagga gggagtgcgc gggctgcccc 150
gggctccctcc ctgccgcctc ctctcagtgg atggttccag gcaccctgtc 200
tggggcaggg agggcacagg cctgcacatc gaaggtgggg tgggaccagg 250
ctgcccctcg ccccagcatc caagtccctcc cttggcgccc cgtggccctg 300
cagactctca gggctaaggt cctctgttgc tttttggttc caccttagaa 350
gagggtccgc ttgactaaga gtagcttgaa ggaggcacca tgcaaggagct 400
gcatactgctc tggtgtggcgc ttctcttggg cctggctcag gcctgcctcg 450
agccctgcga ctgtggggaa aagtatggct tccagatcgc cgactgtgcc 500
taccgcgacc tagaatccgt gccgcctggc ttcccggcca atgtgactac 550
actgagcctg tcagccaaacc ggctgccagg cttgcccggag ggtgccttca 600
gggaggtgcc cctgctgcag tcgctgtggc tggcacacaa tgagatccgc 650
acgggtggccg ccggagccct ggccctctcg agccatctca agagcctgga 700
cctcagccac aatctcatct ctgactttgc ctggagcgcac ctgcacaacc 750
tcagtgccct ccaattgctc aagatggaca gcaacgagct gaccttcatc 800
cccccgacg cttcccgacg cttccgtgct ctgcgctcgc tgcaactcaa 850
ccacaaccgc ttgcacacat tggccgaggg caccttacc cgcgtcacccg 900
cgctgtccca cctgcagatc aacgagaacc ctttcgactg cacctgcggc 950

atcggtggc tcaagacatg ggcctgacc acggccgtgt ccatccccga 1000
gcaggacaac atcgctgca cctcacccca tgtgctcaag ggtacaccgc 1050
tgagccgcct gccgccactg ccatgctcg cgccctcagt gcagctcagc 1100
taccaaccca gccaggatgg tgccgagctg cggcctggtt ttgtgctggc 1150
actgcactgt gatgtggacg ggcagccggc ccctcagctt cactggcaca 1200
tccagatacc cagtggcatt gtggagatca ccagcccaa cgtggcact 1250
gatggcgtg ccctgcctgg cacccctgtg gccagctccc agccgcgctt 1300
ccaggcctt gccaatggca gcctgcttat ccccgacttt ggcaagctgg 1350
aggaaggcac ctacagctgc ctggccacca atgagctggg cagtgctgag 1400
agctcagtgg acgtggcact ggcacgccc ggtgaggggtg gtgaggacac 1450
actggggcgc aggtccatg gcaaagcggt tgagggaaag ggctgctata 1500
cggttaccaa cgaggtgcag ccatcagggc cggaggacaa tgtggtcatc 1550
atctacctca gccgtgctgg gaaccctgag gctgcagtcg cagaaggggt 1600
ccctggcag ctgccccag gcctgctcct gctggccaa agcctcctcc 1650
tcttcttctt ctcacccctcc ttctagcccc acccagggtc tccctaactc 1700
ctccccttgc ccctaccaat gccccttaa gtgctgcagg ggtctggggt 1750
tggcaactcc tgaggcctgc atgggtgact tcacatttc ctacctctcc 1800
ttctaatctc ttctagagca cctgctatcc ccaacttcta gacctgctcc 1850
aaactagtga ctaggataga atttgatccc ctaactcaact gtctgcgggt 1900
ctcattgctg ctaacagcat tgcctgtgt ctcctctcag gggcagcatg 1950
ctaacggggc gacgtcctaa tccaactggg agaagcctca gtgggtggaaat 2000
tccaggcact gtgactgtca agctggcaag ggccaggatt gggggaaatgg 2050
agctggggct tagctggag gtggtctgaa gcagacaggg aatgggagag 2100
gaggatggga agtagacagt ggctggatg gctctgaggc tccctggggc 2150
ctgctcaagc tcctcctgct cttgctgtt ttctgatgat ttgggggctt 2200
gggagtcctt ttgtcctcat ctgagactga aatgtgggaa tccaggatgg 2250
cttccctcc tcttaccctt cttccctcag cctgcaaccc ctatcctgg 2300
acctgtcctc ctttctccc caactatgca tctgttgtct gctcctctgc 2350
aaaggccagc cagttggga gcagcagaga aataaacagc atttctgatg 2400

ccaaaaaaaaaaaaaaa gggcgccgc gactctagag tcgacct 2447

<210> 17

<211> 428

<212> PRT

<213> Homo Sapien

<400> 17

Met Gln Glu Leu His Leu Leu Trp Trp Ala Leu Leu Leu Gly Leu
1 5 10 15

Ala Gln Ala Cys Pro Glu Pro Cys Asp Cys Gly Glu Lys Tyr Gly
20 25 30

Phe Gln Ile Ala Asp Cys Ala Tyr Arg Asp Leu Glu Ser Val Pro
35 40 45

Pro Gly Phe Pro Ala Asn Val Thr Thr Leu Ser Leu Ser Ala Asn
50 55 60

Arg Leu Pro Gly Leu Pro Glu Gly Ala Phe Arg Glu Val Pro Leu
65 70 75

Leu Gln Ser Leu Trp Leu Ala His Asn Glu Ile Arg Thr Val Ala
80 85 90

Ala Gly Ala Leu Ala Ser Leu Ser His Leu Lys Ser Leu Asp Leu
95 100 105

Ser His Asn Leu Ile Ser Asp Phe Ala Trp Ser Asp Leu His Asn
110 115 120

Leu Ser Ala Leu Gln Leu Leu Lys Met Asp Ser Asn Glu Leu Thr
125 130 135

Phe Ile Pro Arg Asp Ala Phe Arg Ser Leu Arg Ala Leu Arg Ser
140 145 150

Leu Gln Leu Asn His Asn Arg Leu His Thr Leu Ala Glu Gly Thr
155 160 165

Phe Thr Pro Leu Thr Ala Leu Ser His Leu Gln Ile Asn Glu Asn
170 175 180

Pro Phe Asp Cys Thr Cys Gly Ile Val Trp Leu Lys Thr Trp Ala
185 190 195

Leu Thr Thr Ala Val Ser Ile Pro Glu Gln Asp Asn Ile Ala Cys
200 205 210

Thr Ser Pro His Val Leu Lys Gly Thr Pro Leu Ser Arg Leu Pro
215 220 225

Pro Leu Pro Cys Ser Ala Pro Ser Val Gln Leu Ser Tyr Gln Pro
230 235 240

Ser Gln Asp Gly Ala Glu Leu Arg Pro Gly Phe Val Leu Ala Leu
245 250 255

His Cys Asp Val Asp Gly Gln Pro Ala Pro Gln Leu His Trp His
260 265 270

Ile Gln Ile Pro Ser Gly Ile Val Glu Ile Thr Ser Pro Asn Val
275 280 285

Gly Thr Asp Gly Arg Ala Leu Pro Gly Thr Pro Val Ala Ser Ser
290 295 300

Gln Pro Arg Phe Gln Ala Phe Ala Asn Gly Ser Leu Leu Ile Pro
305 310 315

Asp Phe Gly Lys Leu Glu Glu Gly Thr Tyr Ser Cys Leu Ala Thr
320 325 330

Asn Glu Leu Gly Ser Ala Glu Ser Ser Val Asp Val Ala Leu Ala
335 340 345

Thr Pro Gly Glu Gly Glu Asp Thr Leu Gly Arg Arg Phe His
350 355 360

Gly Lys Ala Val Glu Gly Lys Gly Cys Tyr Thr Val Asp Asn Glu
365 370 375

Val Gln Pro Ser Gly Pro Glu Asp Asn Val Val Ile Ile Tyr Leu
380 385 390

Ser Arg Ala Gly Asn Pro Glu Ala Ala Val Ala Glu Gly Val Pro
395 400 405

Gly Gln Leu Pro Pro Gly Leu Leu Leu Gly Gln Ser Leu Leu
410 415 420

Leu Phe Phe Phe Leu Thr Ser Phe
425

<210> 18
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 18
gtggctggca cacaatgaga tc 22

<210> 19
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 19
ccaatgtgtg caagcggttg tg 22

卷之三

<210> 20
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 20
tcaagagcct ggacctcagc cacaatctca tctctgactt tgcctggagc 50

<210> 21
<211> 2033
<212> DNA
<213> Homo Sapien

<400> 21
ccaggccggg aggcgcacgcg cccagccgtc taaacgggaa cagccctggc 50
tgagggagct gcagcgcagc agagtatctg acggcgccag gttgcgttagg 100
tgccggcacga ggagtttcc cgccagcgag gaggtcttga gcagcatggc 150
ccggaggaga gccttccctg ccgcgcgcgt ctggctctgg agcatccctcc 200
tgtgcctgct ggcactgcgg gcggaggccg ggccgcgcga ggaggagagc 250
ctgtacctat ggatcgatgc tcaccaggca agagtactca taggatttga 300
agaagatatac ctgattgttt cagagggaa aatggcacct tttacacatg 350
atttcagaaa agcgcaacag agaatgccag ctattcctgt caatatccat 400
tccatgaatt ttacctggca agctgcaggg caggcagaat acttctatga 450
attcctgtcc ttgcgtcccc tggataaagg catcatggca gatccaaccg 500
tcaatgtccc tctgctggga acagtgcctc acaaggcatc agttgtcaa 550
gttggttcc catgtcttgg aaaacaggat ggggtggcag catttgaagt 600
ggatgtgatt gttatgaatt ctgaaggcaa caccattctc caaacacactc 650
aaaatgctat cttcttaaa acatgtcaac aagctgagtg cccaggcggg 700
tgccgaaatg gaggctttttaa taatgaaaga cgcacatctgc agtgcctga 750
tgggttccac ggacctcaact gtgagaaagc cctttgtacc ccacgatgt 800
tgaatggtgg actttgtgtg actcctggtt tctgcacatctgc cccacctgg 850
ttctatggag tgaactgtga caaagcaaac tgctcaacca cctgctttaa 900
tggagggacc tggttctacc ctggaaaatg tatttgcctt ccaggactag 950
agggagagca gtgtgaaatc agcaaaatgcc cacaaccctg tcgaaatgg 1000
ggtaaatgca ttggtaaaag caaatgtaaag tggccaaatggc gttaccagg 1050

agacctctgt tcaaaggcctg tctgcgagcc tggctgtggt gcacatggaa 1100
cctgccatga acccaacaaa tgccaatgtc aagaagggtt gcatggaaga 1150
caactgcaata aaaggtacga agccagcctc atacatgccc tgaggccagc 1200
aggcgcccag ctcaggcagc acacgccttc acttaaaaag gccgaggagc 1250
ggcgggatcc acctgaatcc aattacatct ggtgaactcc gacatctgaa 1300
acgttttaag ttacaccaag ttcatalogct ttgttaacct ttcatalogtt 1350
gaatgttcaa ataatgttca ttacacttaa gaatactggc ctgaatttt 1400
tttagcttcat tataaatcac tgagctgata tttactcttc cttttaagtt 1450
ttctaagtac gtctgttagca ttaggttata gattttcttg tttcagtgt 1500
ttgggacaga ttttatatta tgtcaattga tcaggttaaa atttcagtg 1550
tgtagttggc agatatttc aaaattacaa tgcattatg gtgtctgggg 1600
gcaggggaac atcagaaagg taaaattggg caaaaatgcg taagtcacaa 1650
gaatttggat ggtcagttt atgttgaagt tacagcattt cagattttat 1700
tgtcagatat ttagatgttt gttacatttt taaaaattgc tcttaatttt 1750
taaactctca atacaatata tttgacctt accattattc cagagattca 1800
gtattaaaaa aaaaaaaaaatt acactgtggt agtggcattt aaacaatata 1850
atatattctta aacacaatga aataggaaat ataatgtatg aacttttgc 1900
atggcttga agcaatataa tatattgtaa acaaaacaca gctcttacct 1950
aataaacatt ttatactgtt tgtatgtata aaataaaaggt gctgctttag 2000
tttttggaa aaaaaaaaaa aaaaaaaaaa aaa 2033

<210> 22
<211> 379
<212> PRT
<213> Homo Sapien

<400> 22
Met Ala Arg Arg Ser Ala Phe Pro Ala Ala Ala Leu Trp Leu Trp
1 5 10 15
Ser Ile Leu Leu Cys Leu Leu Ala Leu Arg Ala Glu Ala Gly Pro
20 25 30
Pro Gln Glu Glu Ser Leu Tyr Leu Trp Ile Asp Ala His Gln Ala
35 40 45
Arg Val Leu Ile Gly Phe Glu Glu Asp Ile Leu Ile Val Ser Glu
50 55 60

Gly Lys Met Ala Pro Phe Thr His Asp Phe Arg Lys Ala Gln Gln
 65 70 75
 Arg Met Pro Ala Ile Pro Val Asn Ile His Ser Met Asn Phe Thr
 80 85 90
 Trp Gln Ala Ala Gly Gln Ala Glu Tyr Phe Tyr Glu Phe Leu Ser
 95 100 105
 Leu Arg Ser Leu Asp Lys Gly Ile Met Ala Asp Pro Thr Val Asn
 110 115 120
 Val Pro Leu Leu Gly Thr Val Pro His Lys Ala Ser Val Val Gln
 125 130 135
 Val Gly Phe Pro Cys Leu Gly Lys Gln Asp Gly Val Ala Ala Phe
 140 145 150
 Glu Val Asp Val Ile Val Met Asn Ser Glu Gly Asn Thr Ile Leu
 155 160 165
 Gln Thr Pro Gln Asn Ala Ile Phe Phe Lys Thr Cys Gln Gln Ala
 170 175 180
 Glu Cys Pro Gly Gly Cys Arg Asn Gly Gly Phe Cys Asn Glu Arg
 185 190 195
 Arg Ile Cys Glu Cys Pro Asp Gly Phe His Gly Pro His Cys Glu
 200 205 210
 Lys Ala Leu Cys Thr Pro Arg Cys Met Asn Gly Gly Leu Cys Val
 215 220 225
 Thr Pro Gly Phe Cys Ile Cys Pro Pro Gly Phe Tyr Gly Val Asn
 230 235 240
 Cys Asp Lys Ala Asn Cys Ser Thr Thr Cys Phe Asn Gly Gly Thr
 245 250 255
 Cys Phe Tyr Pro Gly Lys Cys Ile Cys Pro Pro Gly Leu Glu Gly
 260 265 270
 Glu Gln Cys Glu Ile Ser Lys Cys Pro Gln Pro Cys Arg Asn Gly
 275 280 285
 Gly Lys Cys Ile Gly Lys Ser Lys Cys Lys Cys Ser Lys Gly Tyr
 290 295 300
 Gln Gly Asp Leu Cys Ser Lys Pro Val Cys Glu Pro Gly Cys Gly
 305 310 315
 Ala His Gly Thr Cys His Glu Pro Asn Lys Cys Gln Cys Gln Glu
 320 325 330
 Gly Trp His Gly Arg His Cys Asn Lys Arg Tyr Glu Ala Ser Leu
 335 340 345
 Ile His Ala Leu Arg Pro Ala Gly Ala Gln Leu Arg Gln His Thr

350

355

360

Pro Ser Leu Lys Lys Ala Glu Glu Arg Arg Asp Pro Pro Glu Ser
365 370 375

Asn Tyr Ile Trp

<210> 23

<211> 783

<212> DNA

<213> Homo Sapien

<400> 23

agaacctcag aaatgtgagt tatttggaa tggctgttg taaatgtcct 50
tagtaagcc aagaggaggt cttgacttgg ggtcccaggg gtaccgcaga 100
tcccaaggac tggagcagca ctagcaagct ctggaggatg agccaggagt 150
ctggaattga ggctgagcca aagaccccag ggccgtctca gtctcataaa 200
aggggatcag gcaggaggag tttgggagaa acctgagaag ggcctgattt 250
gcagcatcat gatgggcctc tccttggcct ctgctgtgct cctggcctcc 300
ctcctgagtc tccaccttgg aactgccaca cgtggagtg acatatccaa 350
gacctgctgc ttccaatacaca gccacaagcc cttccctgg acctgggtgc 400
gaagctatga attcaccagt aacagctgct cccagcgggc tgtgatattc 450
actaccaaaa gaggcaagaa agtctgtacc catccaagga aaaaatgggt 500
gcaaaaatac atttcttac tgaaaactcc gaaacaattt tgactcagct 550
gaattttcat ccgaggacgc ttggaccccg ctcttggctc tgcaagccctc 600
tggggagcct gcggaatctt ttctgaaggc tacatggacc cgctggggag 650
gagagggtgt ttcttccag agttacttta ataaaggttt ttcataaggt 700
tgaaaaaaaaaaaaaaa aaaaaaaaaaaa aaaaaaaaaaaa aaaaaaaaaaaa 750
aaaaaaaaaaa aaaaaaaaaaaa aaaaaaaaaaaa aaa 783

<210> 24

<211> 94

<212> PRT

<213> Homo Sapien

<400> 24

Met Met Gly Leu Ser Leu Ala Ser Ala Val Leu Leu Ala Ser Leu
1 5 10 15
Leu Ser Leu His Leu Gly Thr Ala Thr Arg Gly Ser Asp Ile Ser
20 25 30

Lys Thr Cys Cys Phe Gln Tyr Ser His Lys Pro Leu Pro Trp Thr
35 40 45
Trp Val Arg Ser Tyr Glu Phe Thr Ser Asn Ser Cys Ser Gln Arg
50 55 60
Ala Val Ile Phe Thr Thr Lys Arg Gly Lys Lys Val Cys Thr His
65 70 75
Pro Arg Lys Lys Trp Val Gln Lys Tyr Ile Ser Leu Leu Lys Thr
80 85 90
Pro Lys Gln Leu

<210> 25
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 25
ggatcaggca ggaggagttt ggg 23

<210> 26
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
ggatgggtac agactttctt gcc 23

<210> 27
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 27
atgatgggcc tctcattggc ctctgctgtg ctcctggcct ccctcctgag 50

<210> 28
<211> 3552
<212> DNA
<213> Homo Sapien

<400> 28
gcgagaacct ttgcacgcgc acaaactacg gggacgattt ctgattgatt 50
tttggcgctt tcgatccacc ctcctccctt ctcatggac tttggggaca 100

aagcgtcccc accgcctcg a cgctcgagc agggcgctat ccaggagcca 150
ggacagcgtc gggaccaga ccatggctcc tggacccaa gatcctaag 200
ttcgtcgtct tcatacgctgc gttctgctg ccggtcggg ttgactctgc 250
caccatcccc cggcaggacg aagttccca gcagacagtgc 300
aacagaggcg cagcctcaag gaggaggagt gtccagcagg atctcataga 350
tcagaatata ctggagcctg taacccgtgc acagagggtg tggattacac 400
cattgcttcc aacaatttgc cttttgcct gctatgtaca gtttgtaaat 450
caggtcaaac aaataaaaagt tcctgtacca cgaccagaga caccgtgtgt 500
cagtgtaaaa aaggaagctt ccaggataaa aactcccctg agatgtgccg 550
gacgtgtaga acagggtgtc ccagagggat ggtcaagggtc agtaattgt 600
cgccccggag tgacatcaag tgcaaaaatg aatcagctgc cagttccact 650
ggaaaaaccc cagcagcgga ggagacagtgc 700
tgcctctccc tatcaactacc ttatcatcat agtggttttgc 750
tagctgtggc tgggttggc ttttcatgtc ggaagaaatt catttcttac 800
ctcaaaggca tctgctcagg tggggagga ggtcccaac gtgtgcacag 850
agtccctttc cggcggcggtt catgtcccttc acgagttctt gggcggagg 900
acaatgcccgg caacgagacc ctgagtaaca gatacttgca gcccacccag 950
gtctctgagc aggaatcca aggtcaggag ctggcagagc taacaggtgt 1000
gactgttagag tcgcccagagg agccacagcg tctgctggaa caggcagaag 1050
ctgaagggtg tcagaggagg aggctgctgg ttccagtgtaa tgacgctgac 1100
tccgctgaca tcagcacctt gctggatgcc tcggcaacac tggagaagg 1150
acatgcaaag gaaacaattc aggaccaact ggtggctcc gaaaagctct 1200
tttatgaaga agatgaggca ggctctgcta cgtcctgcct gtggaaagaat 1250
ctcttcagga aaccagagct tccctcattt acctttctc ctacaaagg 1300
aagcagcctg gaagaaacag tccagttactt gacccatgcc ccaacaaact 1350
ctactatcca atatggggca gcttaccaat ggtcctagaa ctttgttaac 1400
gcacttggag taattttat gaaatactgc gtgtgataag caaacgggag 1450
aaatttataat cagattcttg gctgcatagt tatacgatttgc tgtattaagg 1500
gtcgtttag gccacatgcg gtggctcatg cctgtaatcc cagcactttg 1550

ataggctgag gcagggat tgcttgcgt cggggatgg 1600
catcaacaca gtgaaactcc atctcaattt aaaaagaaaa aaagtggttt 1650
taggatgtca ttcttcgcag ttcttcata tgagacaagt cttttttct 1700
gcttcttata ttgcaagctc catctctact ggtgttgca ttaatgaca 1750
tctaactaca gatgccgcac agccacaatg cttgcctta tagttttta 1800
actttagaac gggattatct ttttattacc tgtattttca gtttcggata 1850
tttttgcattt aatgtgaga ttatcaagac gtagccctat gctaagtcat 1900
gagcatatgg acttacgagg gttcgactta gagtttgag cttaagata 1950
ggattattgg ggcttacccc caccttaatt agagaaacat ttatattgct 2000
tactactgtt ggctgtacat ctctttccg atttttgtat aatgtgtaa 2050
acatggaaaa actttaggaa atgcacttat taggctgtt acatgggtt 2100
cctggataca aatcagcagt caaaaatgac taaaaatata actagtgacg 2150
gagggagaaa tcctccctct gtgggaggca cttactgcat tccagttctc 2200
cctcctgcgc cctgagactg gaccagggtt tgatggctgg cagttctca 2250
agggcagct tgtcttactt gttaattttt gaggtatata gccatattta 2300
tttataaata aatattttt tattttttta taagtagatg tttacatatg 2350
cccaggattt tgaagagcct ggtatcttg ggaagccatg tgtctggttt 2400
gtcgtgctgg gacagtcatg ggactgcattc ttccgacttg tccacagcag 2450
atgaggacag tgagaattaa gtttagatccg agactgcgaa gagttctct 2500
ttcaagcgcc attacagttt aacgttagtg aatcttgcgc ctcatttggg 2550
ctcagggcag agcaggtgtt tatctgcctt ggcatttgcc atggcatcaa 2600
gagggaaagag tggacgggtgc ttggaaatgg tgtgaaatgg ttggccactc 2650
aggcatggat gggccccctct cgcttctggt ggtctgtgaa ctgagtcct 2700
ggatgcctt ttagggcaga gattcctgag ctgcgttttta gggtacagat 2750
tccctgttttgg aggagcttgg cccctctgtt aacatctgac tcatctcaga 2800
gatataattt cttaaacact gtgacaacgg gatctaaat ggctgacaca 2850
tttgtcccttgg tgcacgttc cattatttttta tttaaaaacc tcagtaatcg 2900
tttagcttc ttccagcaa actcttctcc acagtagccc agtcgtggta 2950
ggataaatttta cgatataatgtt cattcttaggg gtttcagtct tttccatctc 3000

aaggcattgt gtgtttgtt ccgggactgg tttggctggg acaaagttag 3050
aactgcctga agttcgaca ttccagattgt tgtgtccatg gagttttagg 3100
aggggatggc ctttccggc ttccgacttc catcctctcc cacttccatc 3150
tggcgtccca caccttgtcc cctgcacttc tggatgacac agggtgctgc 3200
tgccctcctag tctttgcctt tgctggcct tctgtgcagg agacttggtc 3250
tcaaagctca gagagagcca gtccggtccc agtcctttg tcccttcctc 3300
agaggccttc cttgaagatg catctagact accagcctta tcagtgtta 3350
agcttattcc tttaacataa gcttcctgac aacatgaaat tgggggtt 3400
tttggcggtt gggtgattt ttttaggttt gctttatacc cgggccaat 3450
agcacataac acctggtat atatgaaata ctcatatgtt tatgaccaaa 3500
ataaatatga aacctcatrtaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa 3550
aa 3552

<210> 29
<211> 386
<212> PRT
<213> Homo Sapien

<400> 29
Met Gly Leu Trp Gly Gln Ser Val Pro Thr Ala Ser Ser Ala Arg
1 5 10 15
Ala Gly Arg Tyr Pro Gly Ala Arg Thr Ala Ser Gly Thr Arg Pro
20 25 30
Trp Leu Leu Asp Pro Lys Ile Leu Lys Phe Val Val Phe Ile Val
35 40 45
Ala Val Leu Leu Pro Val Arg Val Asp Ser Ala Thr Ile Pro Arg
50 55 60
Gln Asp Glu Val Pro Gln Gln Thr Val Ala Pro Gln Gln Gln Arg
65 70 75
Arg Ser Leu Lys Glu Glu Glu Cys Pro Ala Gly Ser His Arg Ser
80 85 90
Glu Tyr Thr Gly Ala Cys Asn Pro Cys Thr Glu Gly Val Asp Tyr
95 100 105
Thr Ile Ala Ser Asn Asn Leu Pro Ser Cys Leu Leu Cys Thr Val
110 115 120
Cys Lys Ser Gly Gln Thr Asn Lys Ser Ser Cys Thr Thr Thr Arg
125 130 135
Asp Thr Val Cys Gln Cys Glu Lys Gly Ser Phe Gln Asp Lys Asn

140	145	150
Ser Pro Glu Met Cys Arg Thr Cys Arg	Thr Gly Cys Pro Arg Gly	
155	160	165
Met Val Lys Val Ser Asn Cys Thr Pro Arg Ser Asp Ile Lys Cys		
170	175	180
Lys Asn Glu Ser Ala Ala Ser Ser Thr Gly Lys Thr Pro Ala Ala		
185	190	195
Glu Glu Thr Val Thr Thr Ile Leu Gly Met Leu Ala Ser Pro Tyr		
200	205	210
His Tyr Leu Ile Ile Val Val Leu Val Ile Ile Leu Ala Val		
215	220	225
Val Val Val Gly Phe Ser Cys Arg Lys Lys Phe Ile Ser Tyr Leu		
230	235	240
Lys Gly Ile Cys Ser Gly Gly Gly Pro Glu Arg Val His		
245	250	255
Arg Val Leu Phe Arg Arg Arg Ser Cys Pro Ser Arg Val Pro Gly		
260	265	270
Ala Glu Asp Asn Ala Arg Asn Glu Thr Leu Ser Asn Arg Tyr Leu		
275	280	285
Gln Pro Thr Gln Val Ser Glu Gln Glu Ile Gln Gly Gln Glu Leu		
290	295	300
Ala Glu Leu Thr Gly Val Thr Val Glu Ser Pro Glu Glu Pro Gln		
305	310	315
Arg Leu Leu Glu Gln Ala Glu Ala Glu Gly Cys Gln Arg Arg Arg		
320	325	330
Leu Leu Val Pro Val Asn Asp Ala Asp Ser Ala Asp Ile Ser Thr		
335	340	345
Leu Leu Asp Ala Ser Ala Thr Leu Glu Glu Gly His Ala Lys Glu		
350	355	360
Thr Ile Gln Asp Gln Leu Val Gly Ser Glu Lys Leu Phe Tyr Glu		
365	370	375
Glu Asp Glu Ala Gly Ser Ala Thr Ser Cys Leu		
380	385	

<210> 30

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 30
 cataaaaagtt cctgcaccat gaccagagac acagtgtgtc agtgtaaaga 50

 <210> 31
 <211> 963
 <212> DNA
 <213> Homo Sapien

 <400> 31
 gcggcacctg gaagatgcgc ccattggctg gtggcctgct caaggtggtg 50
 ttcgtggtct tcgcctccctt gtgtgcctgg tattcggggt acctgctcgc 100
 agagctcatt ccagatgcac ccctgtccag tgctgcctat agcatccgca 150
 gcatcgaaaa gaggcctgtc ctcaaagctc cagccccaa aaggcaaaaa 200
 tgtgaccact ggactccctg cccatctgac acctatgcct acaggttact 250
 cagcggaggt ggcagaagca agtacgc当地 aatctgcttt gaggataacc 300
 tacttatggg agaacagctg gaaaaatgttccagaggaat aaacattgcc 350
 attgtcaact atgtaactgg gaatgtgaca gcaacacgat gtttgatata 400
 gtatgaaggc gataactctg gaccgatgac aaagtttatt cagagtgc当地 450
 ctccaaaatc cctgctcttc atgggtaccc atgacgacgg aagcacaaga 500
 ctgaataacg atgccaagaa tgccatagaa gcacttgaa gtaaagaaaat 550
 caggaacatg aaattcaggt ctagctgggt atttattgca gcaaaaggct 600
 tggaactccc ttccgaaatt cagagagaaa agatcaacca ctctgatgct 650
 aagaacaaca gatattctgg ctggcctgca gagatccaga tagaaggctg 700
 cataccaaaaa gaacgaagct gacactgc当地 ggtcctgagt aaatgtgttc 750
 tgtataaaca aatgcagctg gaatcgctca agaatcttat ttttctaaat 800
 ccaacagccc atatttgc当地 agtattttgg gtttggta aaccaatgaa 850
 catttgctag ttgttatcaaa tcttggtacg cagttttt ataccagtat 900
 tttatgttagt gaagatgtca attagcagga aactaaaaatg aatggaaatt 950
 cttaaaaaaaaaaaa aaa 963

 <210> 32
 <211> 235
 <212> PRT
 <213> Homo Sapien

 <400> 32
 Met Arg Pro Leu Ala Gly Gly Leu Leu Lys Val Val Val Phe Val Val
 1 5 10 15

Phe	Ala	Ser	Leu	Cys	Ala	Trp	Tyr	Ser	Gly	Tyr	Leu	Leu	Ala	Glu
														20
														25
Leu	Ile	Pro	Asp	Ala	Pro	Leu	Ser	Ser	Ala	Ala	Tyr	Ser	Ile	Arg
														35
														40
Ser	Ile	Gly	Glu	Arg	Pro	Val	Leu	Lys	Ala	Pro	Val	Pro	Lys	Arg
														50
														55
Gln	Lys	Cys	Asp	His	Trp	Thr	Pro	Cys	Pro	Ser	Asp	Thr	Tyr	Ala
														65
														70
Tyr	Arg	Leu	Leu	Ser	Gly	Gly	Gly	Arg	Ser	Lys	Tyr	Ala	Lys	Ile
														80
														85
Cys	Phe	Glu	Asp	Asn	Leu	Leu	Met	Gly	Glu	Gln	Leu	Gly	Asn	Val
														95
														100
Ala	Arg	Gly	Ile	Asn	Ile	Ala	Ile	Val	Asn	Tyr	Val	Thr	Gly	Asn
														110
														115
Val	Thr	Ala	Thr	Arg	Cys	Phe	Asp	Met	Tyr	Glu	Gly	Asp	Asn	Ser
														125
														130
Gly	Pro	Met	Thr	Lys	Phe	Ile	Gln	Ser	Ala	Ala	Pro	Lys	Ser	Leu
														140
														145
Leu	Phe	Met	Val	Thr	Tyr	Asp	Asp	Gly	Ser	Thr	Arg	Leu	Asn	Asn
														155
														160
Asp	Ala	Lys	Asn	Ala	Ile	Glu	Ala	Leu	Gly	Ser	Lys	Glu	Ile	Arg
														170
														175
Asn	Met	Lys	Phe	Arg	Ser	Ser	Trp	Val	Phe	Ile	Ala	Ala	Lys	Gly
														185
														190
Leu	Glu	Leu	Pro	Ser	Glu	Ile	Gln	Arg	Glu	Lys	Ile	Asn	His	Ser
														200
														205
Asp	Ala	Lys	Asn	Asn	Arg	Tyr	Ser	Gly	Trp	Pro	Ala	Glu	Ile	Gln
														215
														220
Ile	Glu	Gly	Cys	Ile	Pro	Lys	Glu	Arg	Ser					
														230
														235

<210> 33

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 33

ggctggcctg cagagatc 18

<210> 34

<211> 20

ARTIFICIAL OLIGONUCLEOTIDES

```
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 34
aatgtgacca ctggactccc 20

<210> 35
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 35
aggcttggaa ctcccttc 18

<210> 36
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 36
aagattcttg agcgattcca gctg 24

<210> 37
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 37
aatccctgtt cttcatggtg acctatgacg acggaagcac aagactg 47

<210> 38
<211> 1215
<212> DNA
<213> Homo Sapien

<400> 38
ccggggaggg gagggccctt cccgtccctc cccgtctctc cccgccccctc 50
cccggtccctc ccgcgcgaagc tccgtccccgc ccgcggcccg gctccgcctt 100
cacctccctgg ccgcggctgc cctctgccccg gtttgtccaa gatggagggc 150
gctccaccgg ggtcgctcgc cctccggctc ctgtgttccg tggcgctacc 200
cgccctccggc tggctgacga cggcgcccc cgagccggcg ccgctgtccg 250
```

生物信息学实验报告

gagccccaca ggacggcatc agaattaatg taactacact gaaagatgt 300
ggggacatat ctaaacagca ggttgttctt aacataacct atgagagtgg 350
acaggtgtat gttaaatgact tacctgtaaa tagtggtgt acccgaataa 400
gctgtcagac tttgatagtg aagaatgaaa atcttgaaaa ttggaggaa 450
aaagaatatt ttggaattgt cagtgttaagg atttttagttc atgagtggcc 500
tatgacatct ggttccagtt tgcaactaat tgtcattcaa gaagaggtag 550
tagagattga tggaaaacaa gttcagcaaa aggatgtcac tgaattgtat 600
atttttagtta agaaccgggg agtactcaga cattcaaact ataccctccc 650
tttggaaagaa agcatgctct actctatttc tcgagacagt gacattttat 700
ttacccttcc taacctctcc aaaaaagaaa gtgttagttc actgcaaacc 750
actagccagt atcttatacg gaatgtggaa accactgttag atgaagatgt 800
tttacctggc aagttacctg aaactcctct cagagcagag ccgccatctt 850
catataaggt aatgtgtcag tggatggaaa agtttagaaa agatctgtgt 900
aggttctgga gcaacgtttt cccagtattt tttcagtttt tgaacatcat 950
ggtggttgga attacaggag cagctgtggt aataaccatc ttaaagggtgt 1000
tttcccaagt ttctgaatac aaaggaattt ttcagttgga taaaaggac 1050
gtcataacctg tgacagctat caacttataat ccagatggtc cagagaaaag 1100
agctgaaaac cttgaagata aaacatgtat ttaaaacgccc atctcatatc 1150
atggactccg aagtagccctg ttgcctccaa atttgccact tgaatataat 1200
tttctttaaa tcgtt 1215

<210> 39
<211> 330
<212> PRT
<213> Homo Sapien

<400> 39
Met Glu Gly Ala Pro Pro Gly Ser Leu Ala Leu Arg Leu Leu Leu
1 5 10 15
Phe Val Ala Leu Pro Ala Ser Gly Trp Leu Thr Thr Gly Ala Pro
20 25 30
Glu Pro Pro Pro Leu Ser Gly Ala Pro Gln Asp Gly Ile Arg Ile
35 40 45
Asn Val Thr Thr Leu Lys Asp Asp Gly Asp Ile Ser Lys Gln Gln
50 55 60

Val	Val	Leu	Asn	Ile	Thr	Tyr	Glu	Ser	Gly	Gln	Val	Tyr	Val	Asn
				65					70				75	
Asp	Leu	Pro	Val	Asn	Ser	Gly	Val	Thr	Arg	Ile	Ser	Cys	Gln	Thr
				80				85				90		
Leu	Ile	Val	Lys	Asn	Glu	Asn	Leu	Glu	Asn	Leu	Glu	Glu	Lys	Glu
				95					100				105	
Tyr	Phe	Gly	Ile	Val	Ser	Val	Arg	Ile	Leu	Val	His	Glu	Trp	Pro
				110				115				120		
Met	Thr	Ser	Gly	Ser	Ser	Leu	Gln	Leu	Ile	Val	Ile	Gln	Glu	
				125				130				135		
Val	Val	Glu	Ile	Asp	Gly	Lys	Gln	Val	Gln	Gln	Lys	Asp	Val	Thr
				140				145				150		
Glu	Ile	Asp	Ile	Leu	Val	Lys	Asn	Arg	Gly	Val	Leu	Arg	His	Ser
				155				160				165		
Asn	Tyr	Thr	Leu	Pro	Leu	Glu	Glu	Ser	Met	Leu	Tyr	Ser	Ile	Ser
				170				175				180		
Arg	Asp	Ser	Asp	Ile	Leu	Phe	Thr	Leu	Pro	Asn	Leu	Ser	Lys	
				185				190				195		
Glu	Ser	Val	Ser	Ser	Leu	Gln	Thr	Thr	Ser	Gln	Tyr	Leu	Ile	Arg
				200				205				210		
Asn	Val	Glu	Thr	Thr	Val	Asp	Glu	Asp	Val	Leu	Pro	Gly	Lys	Leu
				215				220				225		
Pro	Glu	Thr	Pro	Leu	Arg	Ala	Glu	Pro	Pro	Ser	Ser	Tyr	Lys	Val
				230				235				240		
Met	Cys	Gln	Trp	Met	Glu	Lys	Phe	Arg	Lys	Asp	Leu	Cys	Arg	Phe
				245				250				255		
Trp	Ser	Asn	Val	Phe	Pro	Val	Phe	Phe	Gln	Phe	Leu	Asn	Ile	Met
				260				265				270		
Val	Val	Gly	Ile	Thr	Gly	Ala	Ala	Val	Val	Ile	Thr	Ile	Leu	Lys
				275				280				285		
Val	Phe	Phe	Pro	Val	Ser	Glu	Tyr	Lys	Gly	Ile	Leu	Gln	Leu	Asp
				290				295				300		
Lys	Val	Asp	Val	Ile	Pro	Val	Thr	Ala	Ile	Asn	Leu	Tyr	Pro	Asp
				305				310				315		
Gly	Pro	Glu	Lys	Arg	Ala	Glu	Asn	Leu	Glu	Asp	Lys	Thr	Cys	Ile
				320				325				330		

<210> 40

<211> 2498

<212> DNA

<213> Homo Sapien

<400> 40
cgtctctgcg ttcgccatgc gtccccgggc gccagggcca ctctggcctc 50
tgccctgggg ggccctggct tggccgtgg gcttcgttag ctccatgggc 100
tcggggaaacc ccgcgcggc tgggtttgc tggctccagc agggccagga 150
ggccacactgc agcctggtgc tccagactga tgtcacccgg gccgagtgct 200
gtgcctccgg caacattgac accgcctggt ccaacactcac ccacccgggg 250
aacaagatca acctcctcg 300
caaagattcg tgcgacggcg tggagtgcgg cccgggcaag gcgtgcccga 350
tgctgggggg ccgccccgcgc tgcgagtgcg cgccccactg ctcggggctc 400
ccggcgccggc tgcaggctcg cggctcagac ggccacccact accgcgacga 450
gtgcgagctg cgccgcgcgc gctgccgcgg ccacccggac ctgagcgtca 500
tgtaccgggg ccgctgcgcgc aagtctgtg agcacgtggt gtgcccgcgg 550
ccacagtcgt gcgtcgtgga ccagacgggc agcgccact gcgtggtgtg 600
tcgagcggcg ccctgcacctg tgccctccag cccggccag gagcttgcg 650
gcaacaacaa cgtcacctac atctcctcg 700
tgcttcctgg gccgctccat cggcgtgcgc cacgcggca gctgcgcagg 750
cacccctgag gagccgcccag gtggtgagtc tgcagaagag gaagagaact 800
tcgtgtgagc ctgcaggaca ggctgggccc tggtgcccga gggcccccatt 850
catccccctgt tatttattgc cacagcagag tctaatttat atgccacgg 900
cactccttag agcccggatt cggaccactt gggatccca gaacctccct 950
gacgatatcc tggaaggact gaggaaggga ggctggggg ccggctggtg 1000
ggtggatag acctgcgttc cggacactga gcgcctgatt tagggccctt 1050
ctctaggatg ccccagcccc tacccctaaga cctattgccc gggaggattc 1100
cacactccg ctcccttggg gataaaccta ttaattattt ctactatcaa 1150
gagggctggg cattctctgc tggttaattcc tgaagaggca tgactgcttt 1200
tctcagcccc aagcctctag tctgggtgtg tacggagggt ctgcctggg 1250
tgtgtacgga gggcttagcc tgggtgagta cggagggtct agcctgggtg 1300
agtacggagg gtctagectg ggtgagtagc gagggcttag cctgggtgtg 1350
tatggaggat ctgcctggg tgagtatgga gggcttagcc tgggtgagta 1400
tggagggtct agcctgggtg tgtatggagg gtctagcctg ggtgagtagt 1450

gagggtctag cctgggtgt tatggagggt ctgcctgg tgagtatgga 1500
gggtctagcc tgggtgtgta cggagggtct agtctgagtg cgtgtgggaa 1550
cctcagaaca ctgtgacattt agcccagcaa gccaggccct tcatgaaggc 1600
caagaaggct gccaccattc cctgccagcc caagaactcc agcttcccc 1650
ctgcctctgt gtgccccttt gcgtcctgtg aaggccattt agaaatgccc 1700
agtgtgcccc ctgggaaagg gcacggcctg tgctcctgac acgggctgtg 1750
cttggccaca gaaccaccca gcgtctcccc tgctgctgtc cacgtcagtt 1800
catgaggcaa cgtcgcgtgg tctcagacgt ggagcagcca gcccagctc 1850
agagcagggc actgtgtccg gcggagccaa gtccactctg ggggagctct 1900
ggcgccgacc acgggcoact gctcacccac tggcccccag gggggtgttag 1950
acgccaagac tcacgcatgt gtgacatccg gagtcctgga gcccgggtgtc 2000
ccagtggcac cactaggtgc ctgctgcctc cacagtgggg ttcacaccca 2050
gggctccttg gtccccacca acctgccccg gccaggcctg cagacccaga 2100
ctccagccag acctgcctca cccaccaatg cagccgggc tggcgcacacc 2150
agccaggtgc tggctttggg ccagttctcc cacgacggct caccctcccc 2200
tccatctgcg ttgatgctca gaatgccta cctgtgcctg cgtgtaaacc 2250
acagcctcag accagctatg gggagaggac aacacggagg atatccagct 2300
tccccggctc ggggtgagga atgtggggag cttgggcatac ctcctccagc 2350
ctcctccagc ccccaggcag tgccttacct gtggtgccca gaaaagtgcc 2400
cctaggttgg tgggtctaca ggagcctcag ccaggcagcc caccccaccc 2450
tggggccctg cctcaccaag gaaataaaaga ctcaagccat aaaaaaaaa 2498

<210> 41
<211> 263
<212> PRT
<213> Homo Sapien

<400> 41
Met Arg Pro Gly Ala Pro Gly Pro Leu Trp Pro Leu Pro Trp Gly
1 5 10 15
Ala Leu Ala Trp Ala Val Gly Phe Val Ser Ser Met Gly Ser Gly
20 25 30
Asn Pro Ala Pro Gly Gly Val Cys Trp Leu Gln Gln Gly Gln Glu
35 40 45
Ala Thr Cys Ser Leu Val Leu Gln Thr Asp Val Thr Arg Ala Glu

50	55	60
Cys Cys Ala Ser Gly Asn Ile Asp Thr Ala Trp Ser Asn Leu Thr		
65	70	75
His Pro Gly Asn Lys Ile Asn Leu Leu Gly Phe Leu Gly Leu Val		
80	85	90
His Cys Leu Pro Cys Lys Asp Ser Cys Asp Gly Val Glu Cys Gly		
95	100	105
Pro Gly Lys Ala Cys Arg Met Leu Gly Gly Arg Pro Arg Cys Glu		
110	115	120
Cys Ala Pro Asp Cys Ser Gly Leu Pro Ala Arg Leu Gln Val Cys		
125	130	135
Gly Ser Asp Gly Ala Thr Tyr Arg Asp Glu Cys Glu Leu Arg Ala		
140	145	150
Ala Arg Cys Arg Gly His Pro Asp Leu Ser Val Met Tyr Arg Gly		
155	160	165
Arg Cys Arg Lys Ser Cys Glu His Val Val Cys Pro Arg Pro Gln		
170	175	180
Ser Cys Val Val Asp Gln Thr Gly Ser Ala His Cys Val Val Cys		
185	190	195
Arg Ala Ala Pro Cys Pro Val Pro Ser Ser Pro Gly Gln Glu Leu		
200	205	210
Cys Gly Asn Asn Asn Val Thr Tyr Ile Ser Ser Cys His Met Arg		
215	220	225
Gln Ala Thr Cys Phe Leu Gly Arg Ser Ile Gly Val Arg His Ala		
230	235	240
Gly Ser Cys Ala Gly Thr Pro Glu Glu Pro Pro Gly Gly Glu Ser		
245	250	255
Ala Glu Glu Glu Glu Asn Phe Val		
260		

<210> 42
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 42
 tcctgtgagc acgtggtg 20

<210> 43
 <211> 18
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 43
gggtggata gacctgct 18

<210> 44
<211> 18
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 44
aaggccaaga aggctgcc 18

<210> 45
<211> 18
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 45
ccaggcctgc agacccag 18

<210> 46
<211> 24
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 46
cttcctcagt cttccagga tatac 24

<210> 47
<211> 24
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 47
aagctggata tcctccgtgt tgta 24

<210> 48
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 48
cctgaaggagg catgactgct tttctca 27

<210> 49
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 49
ggggataaaac ctattaattt ttgctac 27

<210> 50
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 50
aacgtcacct acatctccctc gtgccacatg cgccaggcca cctg 44

<210> 51
<211> 1690
<212> DNA
<213> Homo Sapien

<400> 51
tgcagagctt gtggaggcca tggggcgctt cgtcgcccgtt ctcgttctctt 50
cgctgctggg gttgtggctt ttgttgttgc gctgcggatg ccccgagggc 100
ggcgagctgc gtgctccgccc agataaaaatc gcgattattt gggccggaaat 150
tggtggact tcagcagcctt attacctgcg gcagaaattt gggaaagatg 200
tgaagataga cctgtttgaa agagaagagg tggggggccg cctggctacc 250
atgatggtgc aggggcaaga atacgaggca ggagggttctg tcatccatcc 300
tttaaatctg cacatgaaac gtttgtcaa agacctgggt ctctctgttg 350
ttcaggcctc tgggtggctt ctggggatat ataatggaga gactctggta 400
tttgaggaga gcaactgggtt cataattaac gtgattaaat tagttggcg 450
ctatggattt caatccctcc gtatgcacat gtgggttagag gacgtgttag 500
acaagttcat gaggatctac cgctaccagt ctcatgacta tgccttcagt 550
agtgtcgaaa aattacttca tgctcttagga ggagatgact tccttggaaat 600
gcttaatcga acacttcttgc aaaccttgca aaaggccggc ttttctgaga 650

agttcctcaa tgaaatgatt gtcctgtta tgagggtcaa ttatggccaa 700
agcacggaca tcaatgcctt tgtggggcg gtgtcactgt cctgttctga 750
ttctggcctt tggcagtag aaggtggcaa taaacttgtt tgctcagggc 800
ttctgcagggc atccaaaagc aatcttatat ctggctcagt aatgtacatc 850
gaggagaaaa caaagaccaa gtacacagga aatccaacaa agatgtatga 900
agtggtctac caaattggaa ctgagactcg ttcagacttc tatgacatcg 950
tcttggtggc cactccgttg aatcgaaaaa tgtcgaatat tactttctc 1000
aacatttgate ctccaattga ggaattccat caatattatc aacatatagt 1050
gacaacttta gttaaggggg aattgaatac atctatctt agctctagac 1100
ccatagataa atttggcctt aatacagttt taaccactga taattcagat 1150
ttgttcatta acagtattgg gattgtgccc tctgtgagag aaaaggaaga 1200
tcctgagcca tcaacagatg gaacatatgt ttggaagatc tttcccaag 1250
aaactcttac taaagcacaa attttaaagc tctttctgtc ctatgattat 1300
gctgtgaaga agccatggct tgcataatcct cactataagc ccccgagaa 1350
atgccccctct atcattctcc atgatcgact ttattacctc aatggcatag 1400
agtgtgcago aagtgcacatg gagatgagtg ccattgcagc ccacaacgct 1450
gcactccttg cctatcacccg ctggaacggg cacacagaca tgattgatca 1500
ggatggctta tatgagaaac ttaaaactga actatgaagt gacacactcc 1550
ttttccctt cctagttcca aatgactatc agtggaaaaa aagaacaaaa 1600
tctgagcaga gatgatttg aaccagatat tttgccatta tcattgtta 1650
ataaaaagtaa tccctgctgg tcataggaaa aaaaaaaaaa 1690

<210> 52
<211> 505
<212> PRT
<213> Homo Sapien

<400> 52
Met Gly Arg Val Val Ala Glu Leu Val Ser Ser Leu Leu Gly Leu
1 5 10 15
Trp Leu Leu Leu Cys Ser Cys Gly Cys Pro Glu Gly Ala Glu Leu
20 25 30
Arg Ala Pro Pro Asp Lys Ile Ala Ile Ile Gly Ala Gly Ile Gly
35 40 45
Gly Thr Ser Ala Ala Tyr Tyr Leu Arg Gln Lys Phe Gly Lys Asp

50	55	60
Val Lys Ile Asp Leu Phe Glu Arg Glu	Glu Val Gly Gly Arg	Leu
65	70	75
Ala Thr Met Met Val Gln Gly Gln	Glu Tyr Glu Ala Gly Gly	Ser
80	85	90
Val Ile His Pro Leu Asn Leu His Met	Lys Arg Phe Val Lys Asp	
95	100	105
Leu Gly Leu Ser Ala Val Gln Ala Ser	Gly Gly Leu Leu Gly Ile	
110	115	120
Tyr Asn Gly Glu Thr Leu Val Phe Glu	Glu Ser Asn Trp Phe Ile	
125	130	135
Ile Asn Val Ile Lys Leu Val Trp Arg	Tyr Gly Phe Gln Ser Leu	
140	145	150
Arg Met His Met Trp Val Glu Asp Val	Leu Asp Lys Phe Met Arg	
155	160	165
Ile Tyr Arg Tyr Gln Ser His Asp Tyr	Ala Phe Ser Ser Val Glu	
170	175	180
Lys Leu Leu His Ala Leu Gly Gly Asp	Asp Phe Leu Gly Met Leu	
185	190	195
Asn Arg Thr Leu Leu Glu Thr Leu Gln	Lys Ala Gly Phe Ser Glu	
200	205	210
Lys Phe Leu Asn Glu Met Ile Ala Pro	Val Met Arg Val Asn Tyr	
215	220	225
Gly Gln Ser Thr Asp Ile Asn Ala Phe	Val Gly Ala Val Ser Leu	
230	235	240
Ser Cys Ser Asp Ser Gly Leu Trp Ala	Val Glu Gly Gly Asn Lys	
245	250	255
Leu Val Cys Ser Gly Leu Leu Gln Ala	Ser Lys Ser Asn Leu Ile	
260	265	270
Ser Gly Ser Val Met Tyr Ile Glu Glu	Lys Thr Lys Thr Lys Tyr	
275	280	285
Thr Gly Asn Pro Thr Lys Met Tyr Glu	Val Val Tyr Gln Ile Gly	
290	295	300
Thr Glu Thr Arg Ser Asp Phe Tyr Asp	Ile Val Leu Val Ala Thr	
305	310	315
Pro Leu Asn Arg Lys Met Ser Asn Ile	Thr Phe Leu Asn Phe Asp	
320	325	330
Pro Pro Ile Glu Glu Phe His Gln Tyr	Tyr Gln His Ile Val Thr	
335	340	345

Thr Leu Val Lys Gly Glu Leu Asn Thr Ser Ile Phe Ser Ser Arg
 350 355 360
 Pro Ile Asp Lys Phe Gly Leu Asn Thr Val Leu Thr Thr Asp Asn
 365 370 375
 Ser Asp Leu Phe Ile Asn Ser Ile Gly Ile Val Pro Ser Val Arg
 380 385 390
 Glu Lys Glu Asp Pro Glu Pro Ser Thr Asp Gly Thr Tyr Val Trp
 395 400 405
 Lys Ile Phe Ser Gln Glu Thr Leu Thr Lys Ala Gln Ile Leu Lys
 410 415 420
 Leu Phe Leu Ser Tyr Asp Tyr Ala Val Lys Lys Pro Trp Leu Ala
 425 430 435
 Tyr Pro His Tyr Lys Pro Pro Glu Lys Cys Pro Ser Ile Ile Leu
 440 445 450
 His Asp Arg Leu Tyr Tyr Leu Asn Gly Ile Glu Cys Ala Ala Ser
 455 460 465
 Ala Met Glu Met Ser Ala Ile Ala Ala His Asn Ala Ala Leu Leu
 470 475 480
 Ala Tyr His Arg Trp Asn Gly His Thr Asp Met Ile Asp Gln Asp
 485 490 495
 Gly Leu Tyr Glu Lys Leu Lys Thr Glu Leu
 500 505

<210> 53
 <211> 728
 <212> DNA
 <213> Homo Sapien

<400> 53
 catttccaaac aagagcactg gccaaagtca gttcttctga gagagtctct 50
 agaagacatg atgctacact cagctttggg tctctgcctc ttactcgta 100
 cagtttcttc caaccttgcc attgcaataa aaaaggaaaa gaggcctcct 150
 cagacactct caagaggatg gggagatgac atcacttggg tacaaaactta 200
 tgaagaaggt ctctttatg ctcaaaaaag taagaagcca ttaatggta 250
 ttcatcacct ggaggattgt caatactctc aagcaactaa gaaagtattt 300
 gccccaaatg aagaaataca agaaatggct cagaataagt tcatacatgct 350
 aaacctttagt catgaaacca ctgataagaa tttatcacct gatgggcaat 400
 atgtgcctag aatcatgttt gtagaccctt ctttaacagt tagagctgac 450
 atagctggaa gatactctaa cagattgtac acatatgagc ctcgggattt 500

acccttattg atagaaaaca tgaagaaagc attaagactt attcagtcag 550
agctataaga gatgatggaa aaaaggcttc acttcaaaga agtcaaattt 600
catgaagaaa acctctggca cattgacaaa tactaaatgt gcaagtatat 650
agattttgta atattactat ttagttttt taatgtgtt gcaatagtct 700
tattaaaata aatgtttttt aaatctga 728

<210> 54
<211> 166
<212> PRT
<213> Homo Sapien

<400> 54
Met Met Leu His Ser Ala Leu Gly Leu Cys Leu Leu Leu Val Thr
1 5 10 15
Val Ser Ser Asn Leu Ala Ile Ala Ile Lys Lys Glu Lys Arg Pro
20 25 30
Pro Gln Thr Leu Ser Arg Gly Trp Gly Asp Asp Ile Thr Trp Val
35 40 45
Gln Thr Tyr Glu Glu Gly Leu Phe Tyr Ala Gln Lys Ser Lys Lys
50 55 60
Pro Leu Met Val Ile His His Leu Glu Asp Cys Gln Tyr Ser Gln
65 70 75
Ala Leu Lys Lys Val Phe Ala Gln Asn Glu Glu Ile Gln Glu Met
80 85 90
Ala Gln Asn Lys Phe Ile Met Leu Asn Leu Met His Glu Thr Thr
95 100 105
Asp Lys Asn Leu Ser Pro Asp Gly Gln Tyr Val Pro Arg Ile Met
110 115 120
Phe Val Asp Pro Ser Leu Thr Val Arg Ala Asp Ile Ala Gly Arg
125 130 135
Tyr Ser Asn Arg Leu Tyr Thr Tyr Glu Pro Arg Asp Leu Pro Leu
140 145 150
Leu Ile Glu Asn Met Lys Lys Ala Leu Arg Leu Ile Gln Ser Glu
155 160 165

Leu

<210> 55
<211> 537
<212> DNA
<213> Homo Sapien

<400> 55

taaaaacagct acaatattcc agggccagtc acttgccatt tctcataaca 50
gcgtcagaga gaaagaactg actgaaacgt ttgagatgaa gaaagttctc 100
ctcctgatca cagccatctt ggcaagtggct gttggttcc cagtctctca 150
agaccaggaa cgagaaaaaa gaagtatcag tgacagcgat gaattagctt 200
cagggtttt tgtgttccct tacccatatac catttcgccc acttccacca 250
attccatttc caagatttcc atggtttaga cgtaatttcc ctattccaat 300
acctgaatct gcccctacaa ctcccccttcc tagcgaaaag taaacaagaa 350
ggataagtca cgataaaacct ggtcacctga aattgaaatt gagccacttc 400
cttgaagaat caaaatttcc gttaataaaaa gaaaaacaaa tctaattgaa 450
atagcacaca gcattctcta gtcaatatct ttagtgatct tcttaataa 500
acatgaaagc aaagattttg gtttcttaat ttccaca 537

<210> 56

<211> 85

<212> PRT

<213> Homo Sapien

<400> 56

Met Lys Val Leu Leu Ile Thr Ala Ile Leu Ala Val Ala
1 5 10 15

Val Gly Phe Pro Val Ser Gln Asp Gln Glu Arg Glu Lys Arg Ser
20 25 30

Ile Ser Asp Ser Asp Glu Leu Ala Ser Gly Phe Phe Val Phe Pro
35 40 45

Tyr Pro Tyr Pro Phe Arg Pro Leu Pro Pro Ile Pro Phe Pro Arg
50 55 60

Phe Pro Trp Phe Arg Arg Asn Phe Pro Ile Pro Ile Pro Glu Ser
65 70 75

Ala Pro Thr Thr Pro Leu Pro Ser Glu Lys
80 85

<210> 57

<211> 2997

<212> DNA

<213> Homo Sapien

<400> 57

cggacgcgtg ggcggggcgcg ccggggaggga ccggcgccgg catggggccgg 50

gggcctggg atgcgggccc gtctcgccgc ctgctgccgc tggctgctgct 100

gctcggcctg gccccggcgcc ccggggggagc gcccccccccc gacggtttag 150

acgtctgtgc cacttgcacat gaacatgccca catgccagca aagagaaggg 200
aagaagatct gtatttgcaa ctatggattt gtagggAACG ggaggactca 250
gtgtgttgc aaaaatgagt gccagttgg agccactctt gtctgtggaa 300
accacacatc ttgccacaac acccccgggg gcttctattt catttgcctg 350
gaaggatatac gagccacaaa caacaacaag acattcattc ccaacgatgg 400
caccttttgt acagacatag atgagtgtga agtttctggc ctgtgcaggc 450
atggagggcg atgcgtgaac actcatggaa gctttgaatg ctactgtatg 500
gatggatact tgccaaggaa tggacctgaa cctttccacc cgaccaccga 550
tgccacatca tgcacagaaa tagactgtgg tacccctcct gaggttccag 600
atggctatat catagggaaat tatacgctta gtctggcag ccaggttcgt 650
tatgcttgca gagaaggatt cttagtgcgtt ccagaagata cagttcaag 700
ctgcacagggc ctgggcacat gggagtcccc aaaattacat tgccaagaga 750
tcaactgtgg caaccctcca gaaatgcggc acgcccattt ggttagggaaat 800
cacagctcca ggctggcggt tggcttcgc tatgtctgtc aagagggctt 850
tgagagccct ggagggaaaga tcacttctgt ttgcacagag aaaggcacct 900
ggagagaaaag tactttaaca tgcacagaaa ttctgacaaa gattaatgtat 950
gtatcactgt ttaatgatac ctgtgtgaga tggcaaataa actcaagaag 1000
aataaaccgg aagatctcat atgtgatatac cataaaagga caacgggttgg 1050
accctatggaa atcagttcgt gaggagacag tcaacttgac cacagacagc 1100
aggaccccg aagtgtgcct agccctgtac ccaggcacca actacaccgt 1150
gaacatctcc acagcacctc ccaggcgctc gatgccagcc gtcatcggtt 1200
tccagacagc tgaagttgat ctcttagaag atgatggaaat tttcaatatt 1250
tcaatattta atgaaacttg tttgaaattt aacaggcggtt ctagggaaatg 1300
tggatcagaa cacatgtacc aatttaccgt tctgggtcag aggtggtatac 1350
tggcttaactt ttctcatgca acatcggtta acttcacaac gagggaacaa 1400
gtgcctgttag tgtgtttggaa tctgtaccct acgactgatt atacggtgaa 1450
tgtgaccctg ctgagatctc ctaagcggca ctcagtgcaa ataacaatag 1500
caactcccccc agcagtaaaa cagaccatca gtaacatttc aggatttaat 1550
gaaacctgct tgagatggag aagcatcaag acagctgata tggaggagat 1600

gtatttattc cacatgggg gccagagatg gtatcagaag gaatttgc 1650
agaaaatgac cttaatatac agtagcagca gcccagatcc cgagggtgtc 1700
ttggacctac gtccgggtac caactacaat gtcagtctcc gggctctgtc 1750
ttcggaaactt cctgtggtca tctccctgac aaccaggata acagagcctc 1800
ccctccccga agtagaaattt tttacgggtc acagaggacc tctaccacgc 1850
ctcagactga ggaaagccaa ggagaaaaat ggaccaatca gttcatatca 1900
ggtgttagtg ctccccctgg ccctccaaag cacatttct tgtgattctg 1950
aaggcgcttc ctccctctt agcaacgcct ctgatgctga tggatacgtg 2000
gctcagaac tactggccaa agatgttcca gatgatgcc tggagatacc 2050
tataggagac aggctgtact atggggata ttataatgca ccctgaaaa 2100
gagggagtga ttactgcatt atattacgaa tcacaagtga atggaataag 2150
gtgagaagac actcctgtgc agtttggct caggtgaaag attcgtcact 2200
catgctgctg cagatggcgg gtgttggact gggttccctg gctgttgtga 2250
tcattctcac attcctctcc ttctcagcgg tgtgatggca gatggacact 2300
gagtggggag gatgcactgc tgctggcag gtgttctggc agcttctcag 2350
gtgcccccac agaggctccg tgtgacttcc gtccagggag catgtggcc 2400
tgcaacttcc tccattccca gctggggccc attcctggat ttaagatgg 2450
ggctatccct gaggagtcac cataaggaga aaactcagga attctgagtc 2500
ttccctgcta caggaccagt tctgtcaat gaacttgaga ctccctgatgt 2550
acactgtgat attgaccgaa ggctacatac agatctgtga atcttggctg 2600
ggacttcctc tgagtgatgc ctgagggtca gtcctctag acattgactg 2650
caagagaatc tctgcaacct cctatataaa agcatttctg ttaattcatt 2700
cagaatccat tctttacaat atgcagttag atgggcttaa gtttggct 2750
gagtttgact ttatgaagga ggtcattgaa aaagagaaca gtgacgtagg 2800
caaatgttcc aagcacttta gaaacagtac tttcctata attagttgat 2850
atactaatac gaaaatatac tagcctggcc atgccaataa gtttccctgct 2900
gtgtctgtta ggcagcattt ctttgatgca atttctatttgc tcctatata 2950
tcaaaagtaa tgtctacatt ccagtaaaaa tatcccgtaa ttaaaaaa 2997

<210> 58
<211> 747

<212> PRT

<213> Homo Sapien

<400> 58

Met	Gly	Arg	Gly	Pro	Trp	Asp	Ala	Gly	Pro	Ser	Arg	Arg	Leu	Leu
1				5					10				15	
Pro	Leu	Leu	Leu	Leu	Gly	Leu	Ala	Arg	Gly	Ala	Ala	Gly	Ala	
					20			25				30		
Pro	Gly	Pro	Asp	Gly	Leu	Asp	Val	Cys	Ala	Thr	Cys	His	Glu	His
					35			40				45		
Ala	Thr	Cys	Gln	Gln	Arg	Glu	Gly	Lys	Lys	Ile	Cys	Ile	Cys	Asn
					50			55				60		
Tyr	Gly	Phe	Val	Gly	Asn	Gly	Arg	Thr	Gln	Cys	Val	Asp	Lys	Asn
					65			70				75		
Glu	Cys	Gln	Phe	Gly	Ala	Thr	Leu	Val	Cys	Gly	Asn	His	Thr	Ser
					80			85				90		
Cys	His	Asn	Thr	Pro	Gly	Gly	Phe	Tyr	Cys	Ile	Cys	Leu	Glu	Gly
					95				100				105	
Tyr	Arg	Ala	Thr	Asn	Asn	Asn	Lys	Thr	Phe	Ile	Pro	Asn	Asp	Gly
					110			115				120		
Thr	Phe	Cys	Thr	Asp	Ile	Asp	Glu	Cys	Glu	Val	Ser	Gly	Leu	Cys
					125			130				135		
Arg	His	Gly	Gly	Arg	Cys	Val	Asn	Thr	His	Gly	Ser	Phe	Glu	Cys
					140			145				150		
Tyr	Cys	Met	Asp	Gly	Tyr	Leu	Pro	Arg	Asn	Gly	Pro	Glu	Pro	Phe
					155			160				165		
His	Pro	Thr	Thr	Asp	Ala	Thr	Ser	Cys	Thr	Glu	Ile	Asp	Cys	Gly
					170			175				180		
Thr	Pro	Pro	Glu	Val	Pro	Asp	Gly	Tyr	Ile	Ile	Gly	Asn	Tyr	Thr
					185			190				195		
Ser	Ser	Leu	Gly	Ser	Gln	Val	Arg	Tyr	Ala	Cys	Arg	Glu	Gly	Phe
					200			205				210		
Phe	Ser	Val	Pro	Glu	Asp	Thr	Val	Ser	Ser	Cys	Thr	Gly	Leu	Gly
					215			220				225		
Thr	Trp	Glu	Ser	Pro	Lys	Leu	His	Cys	Gln	Glu	Ile	Asn	Cys	Gly
					230			235				240		
Asn	Pro	Pro	Glu	Met	Arg	His	Ala	Ile	Leu	Val	Gly	Asn	His	Ser
					245			250				255		
Ser	Arg	Leu	Gly	Gly	Val	Ala	Arg	Tyr	Val	Cys	Gln	Glu	Gly	Phe
					260			265				270		

Glu Ser Pro Gly Gly Lys Ile Thr Ser Val Cys Thr Glu Lys Gly
 275 280 285
 Thr Trp Arg Glu Ser Thr Leu Thr Cys Thr Glu Ile Leu Thr Lys
 290 295 300
 Ile Asn Asp Val Ser Leu Phe Asn Asp Thr Cys Val Arg Trp Gln
 305 310 315
 Ile Asn Ser Arg Arg Ile Asn Pro Lys Ile Ser Tyr Val Ile Ser
 320 325 330
 Ile Lys Gly Gln Arg Leu Asp Pro Met Glu Ser Val Arg Glu Glu
 335 340 345
 Thr Val Asn Leu Thr Thr Asp Ser Arg Thr Pro Glu Val Cys Leu
 350 355 360
 Ala Leu Tyr Pro Gly Thr Asn Tyr Thr Val Asn Ile Ser Thr Ala
 365 370 375
 Pro Pro Arg Arg Ser Met Pro Ala Val Ile Gly Phe Gln Thr Ala
 380 385 390
 Glu Val Asp Leu Leu Glu Asp Asp Gly Ser Phe Asn Ile Ser Ile
 395 400 405
 Phe Asn Glu Thr Cys Leu Lys Leu Asn Arg Arg Ser Arg Lys Val
 410 415 420
 Gly Ser Glu His Met Tyr Gln Phe Thr Val Leu Gly Gln Arg Trp
 425 430 435
 Tyr Leu Ala Asn Phe Ser His Ala Thr Ser Phe Asn Phe Thr Thr
 440 445 450
 Arg Glu Gln Val Pro Val Val Cys Leu Asp Leu Tyr Pro Thr Thr
 455 460 465
 Asp Tyr Thr Val Asn Val Thr Leu Leu Arg Ser Pro Lys Arg His
 470 475 480
 Ser Val Gln Ile Thr Ile Ala Thr Pro Pro Ala Val Lys Gln Thr
 485 490 495
 Ile Ser Asn Ile Ser Gly Phe Asn Glu Thr Cys Leu Arg Trp Arg
 500 505 510
 Ser Ile Lys Thr Ala Asp Met Glu Glu Met Tyr Leu Phe His Ile
 515 520 525
 Trp Gly Gln Arg Trp Tyr Gln Lys Glu Phe Ala Gln Glu Met Thr
 530 535 540
 Phe Asn Ile Ser Ser Ser Arg Asp Pro Glu Val Cys Leu Asp
 545 550 555
 Leu Arg Pro Gly Thr Asn Tyr Asn Val Ser Leu Arg Ala Leu Ser

560	565	570
Ser Glu Leu Pro Val Val Ile Ser Leu Thr Thr Gln Ile Thr Glu		
575	580	585
Pro Pro Leu Pro Glu Val Glu Phe Phe Thr Val His Arg Gly Pro		
590	595	600
Leu Pro Arg Leu Arg Leu Arg Lys Ala Lys Glu Lys Asn Gly Pro		
605	610	615
Ile Ser Ser Tyr Gln Val Leu Val Leu Pro Leu Ala Leu Gln Ser		
620	625	630
Thr Phe Ser Cys Asp Ser Glu Gly Ala Ser Ser Phe Phe Ser Asn		
635	640	645
Ala Ser Asp Ala Asp Gly Tyr Val Ala Ala Glu Leu Leu Ala Lys		
650	655	660
Asp Val Pro Asp Asp Ala Met Glu Ile Pro Ile Gly Asp Arg Leu		
665	670	675
Tyr Tyr Gly Glu Tyr Tyr Asn Ala Pro Leu Lys Arg Gly Ser Asp		
680	685	690
Tyr Cys Ile Ile Leu Arg Ile Thr Ser Glu Trp Asn Lys Val Arg		
695	700	705
Arg His Ser Cys Ala Val Trp Ala Gln Val Lys Asp Ser Ser Leu		
710	715	720
Met Leu Leu Gln Met Ala Gly Val Gly Leu Gly Ser Leu Ala Val		
725	730	735
Val Ile Ile Leu Thr Phe Leu Ser Phe Ser Ala Val		
740	745	

<210> 59
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 59
 ccacttgcca tgaacatgcc ac 22

<210> 60
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 60

cctcttgaca gacatagcga gccac 25
<210> 61
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 61
cactcttgc tggggaaacc acacatcttg ccacaactgt ggc 43

<210> 62
<211> 2015
<212> DNA
<213> Homo Sapien

<400> 62
ggaaaaggta cccgcgagag acagccagca gttctgtgga gcagcggtgg 50
ccggcttagga tgggctgtct ctggggtctg gctctgcccc ttttcttctt 100
ctgctggag gttggggctct ctgggagctc tgcaggcccc agcacccgca 150
gagcagacac tgcgatgaca acggacgaca cagaagtgcc cgctatgact 200
ctagcaccgg gccacgcgc tctggaaact caaacgctga gcgctgagac 250
ctcttctagg gcctcaaccc cagccggccc cattccagaa gcagagacca 300
ggggagccaa gagaatttcc cctgcaagag agaccaggag tttcacaaaa 350
acatctcca acttcatggt gctgatgcc acctccgtgg agacatcagc 400
cgccagtggc agccccgagg gagctggaat gaccacagtt cagaccatca 450
caggcagtga tcccggagaa gccatcttg acaccccttg caccgatgac 500
agctctgaag aggcaaagac actcacaatg gacatattga cattggctca 550
cacctccaca gaagctaagg gcctgtctc agagagcagt gcctttccg 600
acggccccca tccagtcatc accccgtcac gggcctcaga gagcagcgcc 650
tcttccgacg gccccatcc agtcatcacc ccgtcacggg cctcagagag 700
cagcgcctct tccgacggcc cccatccagt catcaccccg tcatggtccc 750
cgggatctga tgtcaacttc ctgcgtgaag ccctggtgac tgtcacaaaa 800
atcgaggtta ttaattgcag catcacagaa atagaaacaa caacttccag 850
catccctggg gcctcagaca tagatctcat cccccacggaa ggggtgaagg 900
cctcgtccac ctccgatcca ccagctctgc ctgactccac tgaagcaaaa 950
ccacacatca ctgaggtcac agcctctgcc gagacctgt ccacagccgg 1000

caccacagag tcagctgcac ctcatgccac gttgggacc ccactcccc 1050
ctaacagcgc cacagaaaga gaagtgcacag caccggggc cagaccctc 1100
agtggagctc tggcacagt tagcaggaat cccctggaag aaacctcago 1150
cctctgtt gagacaccaa gttacgtcaa agtctcagga gcagctccgg 1200
tctccataga ggctgggtca gcagtggca aaacaacttc ctttgctggg 1250
agctctgctt ctcctacag cccctcgaa gccgcctca agaacttcac 1300
ccctcagag acaccgacca tggacatcgc aaccaagggg cccttcccc 1350
ccagcaggga ccctttctt cttcgactc cgactacaac caacagcagc 1400
cgagggacga acagcacctt agccaagatc acaacctcag cgaagaccac 1450
gatgaagccc caacagccac gcccacgact gcccggacga gcccggaccac 1500
agacgtgagt gcaggtgaaa atggaggaaa ctcttcctt cggctgagtg 1550
tggcttcccc ggaagacctc actgacccca gagtggcaga aaggctgatg 1600
cagcagctcc accgggaact ccacgcccac gcgcctcact tccaggtctc 1650
cttactgcgt gtcaggagag gctaacggac atcagctgca gccaggcatg 1700
tcccgtatgc caaaagaggg tgctgcccct agcctggcc cccaccgaca 1750
gactgcagct gcgttactgt gctgagaggt acccagaagg ttcccatgaa 1800
ggcagcatg tccaagcccc taacccaga tgtggcaaca ggaccctcgc 1850
tcacatccac cggagtgtat gtatggggag gggcttcacc tggccatgaa 1900
ggtgtccttg gactcacctt ggcacatgtt ctgtgttca gtaaagagag 1950
acgtgatcac ccatctgtgt gcttccatcc tgcattaaaa ttcaactcagt 2000
gtggccaaaa aaaaa 2015

<210> 63
<211> 482
<212> PRT
<213> Homo Sapien

<400> 63
Met Gly Cys Leu Trp Gly Leu Ala Leu Pro Leu Phe Phe Phe Cys
1 5 10 15
Trp Glu Val Gly Val Ser Gly Ser Ser Ala Gly Pro Ser Thr Arg
20 25 30
Arg Ala Asp Thr Ala Met Thr Thr Asp Asp Thr Glu Val Pro Ala
35 40 45
Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu

50	55	60
Ser Ala Glu Thr Ser Ser Arg Ala Ser	Thr Pro Ala Gly Pro Ile	
65	70	75
Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg	Ile Ser Pro Ala Arg	
80	85	90
Glu Thr Arg Ser Phe Thr Lys Thr Ser	Pro Asn Phe Met Val Leu	
95	100	105
Ile Ala Thr Ser Val Glu Thr Ser Ala Ala Ser	Gly Ser Pro Glu	
110	115	120
Gly Ala Gly Met Thr Thr Val Gln Thr	Ile Thr Gly Ser Asp Pro	
125	130	135
Glu Glu Ala Ile Phe Asp Thr Leu Cys	Thr Asp Asp Ser Ser Glu	
140	145	150
Glu Ala Lys Thr Leu Thr Met Asp Ile	Leu Thr Leu Ala His Thr	
155	160	165
Ser Thr Glu Ala Lys Gly Leu Ser Ser	Glu Ser Ser Ala Ser Ser	
170	175	180
Asp Gly Pro His Pro Val Ile Thr Pro	Ser Arg Ala Ser Glu Ser	
185	190	195
Ser Ala Ser Ser Asp Gly Pro His Pro Val	Ile Thr Pro Ser Arg	
200	205	210
Ala Ser Glu Ser Ser Ala Ser Ser Asp	Gly Pro His Pro Val Ile	
215	220	225
Thr Pro Ser Trp Ser Pro Gly Ser Asp	Val Thr Leu Leu Ala Glu	
230	235	240
Ala Leu Val Thr Val Thr Asn Ile Glu	Val Ile Asn Cys Ser Ile	
245	250	255
Thr Glu Ile Glu Thr Thr Ser Ser	Ile Pro Gly Ala Ser Asp	
260	265	270
Ile Asp Leu Ile Pro Thr Glu Gly Val	Lys Ala Ser Ser Thr Ser	
275	280	285
Asp Pro Pro Ala Leu Pro Asp Ser Thr	Glu Ala Lys Pro His Ile	
290	295	300
Thr Glu Val Thr Ala Ser Ala Glu Thr	Leu Ser Thr Ala Gly Thr	
305	310	315
Thr Glu Ser Ala Ala Pro His Ala Thr	Val Gly Thr Pro Leu Pro	
320	325	330
Thr Asn Ser Ala Thr Glu Arg Glu Val	Thr Ala Pro Gly Ala Thr	
335	340	345

```
<210> 64  
<211> 1252  
<212> DNA  
<213> Homo Sapien
```

```
<400> 64
gcctctgaat tggggcag tctggcagtg gagctctccc cggtctgaca 50
gccactccag aggccatgtc tcgtttcttgc ctagatttgg ctttcagctt 100
cctgttaatt ctggctttgg gccaggcagt ccaatttcaa gaatatgtct 150
ttctccaatt tctgggctta gataaggcgc cttcacccca gaagttccaa 200
cctgtgcctt atatcttgaa gaaaattttc caggatcgcg aggcagcagc 250
gaccactggg gtctcccgag acttatgcta cgtaaaggag ctgggcgtcc 300
gcgggaatgt acttcgctt ctccagacc aaggtttctt tctttaccca 350
aagaaaattt cccaagcttc ctccgtcctg cagaagctcc tctactttaa 400
cctgtctgcc atcaaagaaa gggAACAGTT gacattggcc cagctgggcc 450
tggacttggg gcccaattct tactataacc tgggaccaga gctggaactg 500
qctctgttcc tggttcagga gcctcatgtg tggggccaga ccacccctaa 550
```

gccaggtaaa atgtttgtgt tgcggtcagt cccatggcca caaggtgctg 600
ttcaccaa cctgctggat gtagctaagg attggaatga caaccccccgg 650
aaaaatttcg ggttattcct ggagatactg gtcaaagaag atagagactc 700
aggggtgaat tttcagcctg aagacacctg tgccagacta agatgctccc 750
ttcatgcttc cctgctggtg gtgactctca accctgatca gtgccaccct 800
tctcgaaaaa ggagagcagc catccctgtc cccaaagcttt cttgtaagaa 850
cctctgccac cgtcaccagc tattcattaa cttccggac ctgggttggc 900
acaagtggat cattgcccc aagggttca tggcaaatta ctgccatgga 950
gagtgccct tctcaactgac catctctctc aacagctcca attatgcttt 1000
catgcaagcc ctgatgcattt ccgttgcaccc agagatcccc caggctgtgt 1050
gtatccccac caagctgtct cccatttcca tgctctacca ggacaataat 1100
gacaatgtca ttctacgaca ttatgaagac atggtagtgcg atgaatgtgg 1150
gtgtggtag gatgtcagaa atggaaatag aaggagtgtt cttaggtaa 1200
atctttaat aaaactacct atctggttta tgaccactta gatcgaaatg 1250

tc 1252

<210> 65
<211> 364
<212> PRT
<213> Homo Sapien

<400> 65
Met Leu Arg Phe Leu Pro Asp Leu Ala Phe Ser Phe Leu Leu Ile
1 5 10 15
Leu Ala Leu Gly Gln Ala Val Gln Phe Gln Glu Tyr Val Phe Leu
20 25 30
Gln Phe Leu Gly Leu Asp Lys Ala Pro Ser Pro Gln Lys Phe Gln
35 40 45
Pro Val Pro Tyr Ile Leu Lys Lys Ile Phe Gln Asp Arg Glu Ala
50 55 60
Ala Ala Thr Thr Gly Val Ser Arg Asp Leu Cys Tyr Val Lys Glu
65 70 75
Leu Gly Val Arg Gly Asn Val Leu Arg Phe Leu Pro Asp Gln Gly
80 85 90
Phe Phe Leu Tyr Pro Lys Lys Ile Ser Gln Ala Ser Ser Cys Leu
95 100 105
Gln Lys Leu Leu Tyr Phe Asn Leu Ser Ala Ile Lys Glu Arg Glu

110	115	120
Gln Leu Thr Leu Ala Gln Leu Gly	Leu Asp Leu Gly Pro Asn Ser	
125	130	135
Tyr Tyr Asn Leu Gly Pro Glu Leu Glu	Leu Ala Leu Phe Leu Val	
140	145	150
Gln Glu Pro His Val Trp Gly Gln Thr	Thr Pro Lys Pro Gly Lys	
155	160	165
Met Phe Val Leu Arg Ser Val Pro Trp	Pro Gln Gly Ala Val His	
170	175	180
Phe Asn Leu Leu Asp Val Ala Lys Asp	Trp Asn Asp Asn Pro Arg	
185	190	195
Lys Asn Phe Gly Leu Phe Leu Glu Ile	Leu Val Lys Glu Asp Arg	
200	205	210
Asp Ser Gly Val Asn Phe Gln Pro Glu	Asp Thr Cys Ala Arg Leu	
215	220	225
Arg Cys Ser Leu His Ala Ser Leu Leu	Val Val Thr Leu Asn Pro	
230	235	240
Asp Gln Cys His Pro Ser Arg Lys Arg	Arg Ala Ala Ile Pro Val	
245	250	255
Pro Lys Leu Ser Cys Lys Asn Leu Cys	His Arg His Gln Leu Phe	
260	265	270
Ile Asn Phe Arg Asp Leu Gly Trp His	Lys Trp Ile Ile Ala Pro	
275	280	285
Lys Gly Phe Met Ala Asn Tyr Cys His	Gly Glu Cys Pro Phe Ser	
290	295	300
Leu Thr Ile Ser Leu Asn Ser Ser Asn	Tyr Ala Phe Met Gln Ala	
305	310	315
Leu Met His Ala Val Asp Pro Glu Ile	Pro Gln Ala Val Cys Ile	
320	325	330
Pro Thr Lys Leu Ser Pro Ile Ser Met	Leu Tyr Gln Asp Asn Asn	
335	340	345
Asp Asn Val Ile Leu Arg His Tyr Glu	Asp Met Val Val Asp Glu	
350	355	360
Cys Gly Cys Gly		

<210> 66
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 66
gtctgacagc cactccagag 20

<210> 67
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 67
tctccaattt ctgggcttag ataaggcgcc ttcaccccaag aagttcc 47

<210> 68
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 68
gtcccaggtt atagtaagaa ttgg 24

<210> 69
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 69
gtgttgcggc cagtccatg 20

<210> 70
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 70
gctgtctccc atttccatgc 20

<210> 71
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 71
cgactaccat gtattataa tgtc 24

<210> 72
<211> 2849
<212> DNA
<213> Homo Sapien

<400> 72
caacttctcc ctcttccct ttactttcga gaaaccgcgc ttccgcttct 50
ggtcgcagag acctcgaga ccgcgcggg gagacggagg tgctgtgggt 100
gggggggacc tggctgct cgtaccgccc cccaccctcc tcttctgcac 150
tgccgtcctc cgaaagacct tttccctgc tctgtttct tcaccgagtc 200
tgtgcacatgc cccggacactg gccgggagga ggcttgcccg gcgggagatg 250
ctctaggggc ggcgcgggag gagcggccgg cggacggag ggcccgccag 300
gaagatgggc tccccgtggac agggactctt gctggcgtac tgccctgctcc 350
ttgcctttgc ctctggcctg gtcctgagtc gtgtgccccca tgtccagggg 400
gaacagcagg agtgggaggg gactgaggag ctgccgtcgc ctccggacca 450
tgccgagagg gctgaagaac aacatgaaaa atacaggccc agtcaggacc 500
aggggtctccc tgcttcccg tgcttgcgtc gctgtgaccc cggtacactcc 550
atgtacccgg cgaccgcgt gccccagatc aacatcacta tcttgaaagg 600
ggagaagggt gaccgcggag atcgaggcct ccaaggaaaa tatggcaaaa 650
caggctcagc aggggcccagg gcccacactg gacccaaagg gcagaaggc 700
tccatggggg cccctggga ggggtgcaag agccactacg ccgcctttc 750
ggtggccgg aagaagcca tgcacagcaa ccactactac cagacggta 800
tcttcgacac ggagttcgtg aacctctacg accacttcaa catgttccac 850
ggcaagtct actgctacgt gcccggctc tacttcttca gcctcaacgt 900
gcacacactgg aaccagaagg agacctacat gcacatcatg aagaacgagg 950
aggaggtggt gatcttggtc ggcgcagggtgg ggcgcaggcat catcatgaa 1000
agccagagcc tggatgttgc gctgcggagag caggaccagg tgtgggtacg 1050
cctctacaag ggccaaacgtg agaacgcacat ctccagcgag gagctggaca 1100
cctacatcac ctccagttgc tacctggtca agcacgcac acgcacccctag 1150
ctggccggcc acctcccttc ctctcgccac cttccacccca tgcgtgtgc 1200
tgaccccccacc gctctttccc cgatccctgg actccgactc cctggctttg 1250

gcattcagtg agacgcctg cacacacaga aagccaaagc gatcggtgct 1300
cccagatccc gcagcctctg gagagagctg acggcagatg aaatcaccag 1350
ggcggggcac ccgcgagaac cctctggac cttccgcggc cctctctgca 1400
cacatcctca agtgaccccg cacggcgaga cgcggtggc ggcagggcgt 1450
cccagggtgc ggcaccgcgg ctccagtcct tggaaataat taggcaaatt 1500
ctaaaggctc caaaaggagc aaagtaaacc gtggaggaca aagaaaagg 1550
ttgttatttt tgtcttcca gccagcctgc tggctccaa gagagaggcc 1600
tttcagttg agactctgct taagagaaga tccaaagtta aagctctgg 1650
gtcaggggag gggccggggg cagggaaacta cctctggctt aattctttta 1700
agccacgtag gaactttctt gagggatagg tggaccctga catccctgtg 1750
gccttgccta agggctctgc tggctttct gagtcacagc tgcgaggtga 1800
tggggctgg ggccccaggc gtcagcctcc cagagggaca gctgagcccc 1850
ctgccttggc tccaggttgg tagaaggcagc cgaagggctc ctgacagtgg 1900
ccagggaccc ctgggtcccc caggcctgca gatgttcta tgagggcag 1950
agctccttgg tacatccatg tgtggctctg ctccacccct gtgccacccc 2000
agagccctgg ggggtggct ccatgcctgc caccctggca tcggcttct 2050
gtgccgcctc ccacacaaaat cagccccaga aggccccggg gccttggctt 2100
ctgttttta taaaacacct caagcagcac tgcagtcctcc catctcctcg 2150
tgggctaagc atcaccgctt ccacgtgtgt tgtgttggtt ggcagcaagg 2200
ctgatccaga ccccttctgc ccccaactgcc ctcatccagg cctctgacca 2250
gtagcctgag aggggctttt tctaggcttc agagcagggg agagctggaa 2300
ggggctagaa agctcccgct tgtctgtttc tcaggctcct gtgagcctca 2350
gtcctgagac cagagtcaag aggaagtaca cgtcccaatc acccgtgtca 2400
ggattcactc tcaggagctg ggtggcagga gaggcaatag cccctgtggc 2450
aattgcagga ccagctggag cagggttgcg gtgtctccac ggtgctctcg 2500
ccctgccccat ggccacccca gactctgatc tccaggaacc ccatagcccc 2550
tctccacctc accccatgtt gatgcccagg gtcactcttgc tctaccgctg 2600
ggcccccaaa cccccgtgc ctctcttctc tccccccatc ccccacctgg 2650
ttttgactaa tcttgcttcc ctctctggc ctggctgccc ggtatctgggg 2700

tcccttaagtc cctcttttta aagaacttct gcgggtcaga ctctgaagcc 2750
 gagttgctgt gggcggtccc ggaagcagag cgccacactc gctgcttaag 2800
 ctcccccagc tctttccaga aaacattaaa ctcagaattg tgtttcaa 2849

 <210> 73
 <211> 281
 <212> PRT
 <213> Homo Sapien

 <400> 73
 Met Gly Ser Arg Gly Gln Gly Leu Leu Leu Ala Tyr Cys Leu Leu
 1 5 10 15

 Leu Ala Phe Ala Ser Gly Leu Val Leu Ser Arg Val Pro His Val
 20 25 30

 Gln Gly Glu Gln Gln Glu Trp Glu Gly Thr Glu Glu Leu Pro Ser
 35 40 45

 Pro Pro Asp His Ala Glu Arg Ala Glu Glu Gln His Glu Lys Tyr
 50 55 60

 Arg Pro Ser Gln Asp Gln Gly Leu Pro Ala Ser Arg Cys Leu Arg
 65 70 75

 Cys Cys Asp Pro Gly Thr Ser Met Tyr Pro Ala Thr Ala Val Pro
 80 85 90

 Gln Ile Asn Ile Thr Ile Leu Lys Gly Glu Lys Gly Asp Arg Gly
 95 100 105

 Asp Arg Gly Leu Gln Gly Lys Tyr Gly Lys Thr Gly Ser Ala Gly
 110 115 120

 Ala Arg Gly His Thr Gly Pro Lys Gly Gln Lys Gly Ser Met Gly
 125 130 135

 Ala Pro Gly Glu Arg Cys Lys Ser His Tyr Ala Ala Phe Ser Val
 140 145 150

 Gly Arg Lys Lys Pro Met His Ser Asn His Tyr Tyr Gln Thr Val
 155 160 165

 Ile Phe Asp Thr Glu Phe Val Asn Leu Tyr Asp His Phe Asn Met
 170 175 180

 Phe Thr Gly Lys Phe Tyr Cys Tyr Val Pro Gly Leu Tyr Phe Phe
 185 190 195

 Ser Leu Asn Val His Thr Trp Asn Gln Lys Glu Thr Tyr Leu His
 200 205 210

 Ile Met Lys Asn Glu Glu Glu Val Val Ile Leu Phe Ala Gln Val
 215 220 225

 Gly Asp Arg Ser Ile Met Gln Ser Gln Ser Leu Met Leu Glu Leu

230	235	240
Arg Glu Gln Asp Gln Val Trp Val Arg Leu Tyr Lys Gly Glu Arg		
245	250	255
Glu Asn Ala Ile Phe Ser Glu Glu Leu Asp Thr Tyr Ile Thr Phe		
260	265	270
Ser Gly Tyr Leu Val Lys His Ala Thr Glu Pro		
275	280	

<210> 74
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 74
tacaggccca gtcaggacca gggg 24

<210> 75
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 75
ctgaagaagt agaggccggg cacg 24

<210> 76
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 76
cccggtgctt gcgctgtgtg gaccccggtt cttccatgtt ccogg 45

<210> 77
<211> 1042
<212> DNA
<213> Homo Sapien

<400> 77
gaattcggca cgaggaaaga agagaaagaa aatctccggg gctgctggg 50
gcataaaag aagccctgtt gccttgctgg ttttaccatc cagaccagag 100
tcaggccaca gacggacatg gctgctcaag gctggtccat gctcctgctg 150
gctgtccta accttaggcat cttcgtccgt ccctgtgaca ctcaagagct 200

acgatgtctg tgtattcagg aacactctga attcattcct ctcaaactca 250
ttaaaaatat aatggtgata ttcgagacca tttactgcaa cagaaaggaa 300
gtgatagcag tcccaaaaaa tgggagtatg atttgttgg atcctgatgc 350
tccatgggtg aaggctactg ttggccaat tactaacagg ttcc tacctg 400
aggacctcaa acaaaaaggaa ttccaccgg caatgaagct tctgtatagt 450
gtttagcatg aaaagcctct atatcttca tttggagac ctgagaacaa 500
gagaatattt cccttccaa ttcccggagac ctctagacac tttgttgc 550
tagctcacaa cagtgtatagg aattttctac gggactccag tgaagtcagc 600
ttgacaggca gtgatgccta aaagccactc atgaggcaaa gagtttcaag 650
gaagctctcc tcctggagtt ttggcggtct cattcttata ctctattccc 700
gcgttagtct ggtgtatgga tctatgagct ctctttat attttattat 750
aaatgttta ttacttaac ttccatgtga atgttcacag gtgactgctc 800
ccccatcccc atttcttgcatt accatata atggcatcat atacccttt 850
attgactgac aaactactca gattgcttaa cattttgtgc ttcaaagtct 900
tatcccactc cactatggc tggtacagag tgcatctcggttgtagagcaa 950
ggctccttgt cttagtgcc ccagggtgaa atacttcttt gaaaaatttt 1000
cattcatcag aaaatctgaa ataaaaatata tttttttttt ag 1042

<210> 78
<211> 167
<212> PRT
<213> Homo Sapien

<400> 78
Met Ala Ala Gln Gly Trp Ser Met Leu Leu Leu Ala Val Leu Asn
1 5 10 15
Leu Gly Ile Phe Val Arg Pro Cys Asp Thr Gln Glu Leu Arg Cys
20 25 30
Leu Cys Ile Gln Glu His Ser Glu Phe Ile Pro Leu Lys Leu Ile
35 40 45
Lys Asn Ile Met Val Ile Phe Glu Thr Ile Tyr Cys Asn Arg Lys
50 55 60
Glu Val Ile Ala Val Pro Lys Asn Gly Ser Met Ile Cys Leu Asp
65 70 75
Pro Asp Ala Pro Trp Val Lys Ala Thr Val Gly Pro Ile Thr Asn
80 85 90

Arg Phe Leu Pro Glu Asp Leu Lys Gln Lys Glu Phe Pro Pro Ala
95 100 105

Met Lys Leu Leu Tyr Ser Val Glu His Glu Lys Pro Leu Tyr Leu
110 115 120

Ser Phe Gly Arg Pro Glu Asn Lys Arg Ile Phe Pro Phe Pro Ile
125 130 135

Arg Glu Thr Ser Arg His Phe Ala Asp Leu Ala His Asn Ser Asp
140 145 150

Arg Asn Phe Leu Arg Asp Ser Ser Glu Val Ser Leu Thr Gly Ser
155 160 165

Asp Ala

<210> 79
<211> 798
<212> DNA
<213> Homo Sapien

<220>
<221> unsure
<222> 794
<223> unknown base

<400> 79
cagacatggc tcagtcactg gctctgagcc tccttatacct ggttctggcc 50
tttggcatcc ccaggaccca aggcaagtat ggaggggctc aggactgttg 100
cctcaagtac agccaaagga agattcccgc caaggttgctc cgcaagctacc 150
ggaagcagga accaagctta ggctgctcca tcccagctat cctgttcttg 200
ccccgcaagc gctctcaggc agagctatgt gcagacccaa aggagctctg 250
ggtgccagcag ctgatgcagc atctggacaa gacaccatcc ccacagaaac 300
cagccccaggc ctgcaggaag gacagggggg cctccaagac tggcaagaaa 350
ggaaagggct ccaaaggctg caagaggact gagcggtcac agaccctaa 400
agggccatag cccagtgagc agcctggagc cctggagacc ccaccagcct 450
caccagcgct tgaaggctga acccaagatg caagaaggag gctatgctca 500
ggggccctgg agcagccacc ccatgctggc cttgccacac tctttctcct 550
gctttaacca ccccatctgc attcccaagct ctaccctgca tggctgagct 600
gccccacagca ggccagggtcc agagagaccg aggagggaga gtctcccagg 650
gagcatgaga ggaggcagca ggactgtccc cttgaaggag aatcatcagg 700
accctggacc tgatacggct ccccaagtaca ccccacctct tccttgtaaa 750

tatgatttat acctaactga ataaaaagct gttctgtctt cccnccca 798

<210> 80

<211> 134

<212> PRT

<213> Homo Sapien

<400> 80

Met Ala Gln Ser Leu Ala Leu Ser Leu Leu Ile Leu Val Leu Ala
1 5 10 15

Phe Gly Ile Pro Arg Thr Gln Gly Ser Asp Gly Gly Ala Gln Asp
20 25 30

Cys Cys Leu Lys Tyr Ser Gln Arg Lys Ile Pro Ala Lys Val Val
35 40 45

Arg Ser Tyr Arg Lys Gln Glu Pro Ser Leu Gly Cys Ser Ile Pro
50 55 60

Ala Ile Leu Phe Leu Pro Arg Lys Arg Ser Gln Ala Glu Leu Cys
65 70 75

Ala Asp Pro Lys Glu Leu Trp Val Gln Gln Leu Met Gln His Leu
80 85 90

Asp Lys Thr Pro Ser Pro Gln Lys Pro Ala Gln Gly Cys Arg Lys
95 100 105

Asp Arg Gly Ala Ser Lys Thr Gly Lys Lys Gly Lys Gly Ser Lys
110 115 120

Gly Cys Lys Arg Thr Glu Arg Ser Gln Thr Pro Lys Gly Pro
125 130

<210> 81

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 81

agacatggct cagtcaactgg 20

<210> 82

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 82

gaccgcataaa gggccatag 19

<210> 83

<211> 924
<212> DNA
<213> Homo Sapien

<400> 83
aaggagcagc ccgcaagcac caagtgagag gcatgaagtt acagtgtgtt 50
tcccttggc tctgggtac aatactgata ttgtgcttag tagacaacca 100
cggtctcagg agatgtctga tttccacaga catgcaccat atagaagaga 150
gtttccaaga aatcaaaga gccatccaag ctaaggacac cttccaaat 200
gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250
tgtgtgctgc gtgaccaaga acctctggc gttctacgtg gacagggtgt 300
tcaaggatca tcaggagcca aaccccaaaa tcttgagaaa aatcagcagc 350
attgccaact ct当地tcta catgcagaaa actctgcggc aatgtcagga 400
acagaggcag tgtcactgca ggcaggaagc caccaatgcc accagagtca 450
tccatgacaa ctatgatcag ctggagggtcc acgctgctgc cattaaatcc 500
ctgggagagc tcgacgtctt tctagcctgg attaataaga atcatgaagt 550
aatgttctca gcttgatgac aaggaacctg tatagtgatc cagggatgaa 600
cacccctgt gcggtttact gtgggagaca gcccaccttg aaggggaagg 650
agatgggaa ggcccctgc agctgaaagt cccactggct ggcctcaggc 700
tgtcttattc cgcttgaaaa taggcaaaaa gtctactgtg gtatttgtaa 750
taaactctat ctgctgaaag ggcctgcagg cc当地ctggg agtaaaggc 800
tgcctcccc tctaatttat tgtaaagtca tatagtccat gtctgtgatg 850
tgagccaaatgt gatatcctgt agtacacatt gtactgagtg gttttctga 900
ataaaattcca tattttacccat atga 924

<210> 84
<211> 177
<212> PRT
<213> Homo Sapien

```

<400> 84
Met Lys Leu Gln Cys Val Ser Leu Trp Leu Leu Gly Thr Ile Leu
      1           5           10          15

Ile Leu Cys Ser Val Asp Asn His Gly Leu Arg Arg Cys Leu Ile
      20          25          30

Ser Thr Asp Met His His Ile Glu Glu Ser Phe Gln Glu Ile Lys
      35          40          45

```

Arg Ala Ile Gln Ala Lys Asp Thr Phe Pro Asn Val Thr Ile Leu
 50 60
 Ser Thr Leu Glu Thr Leu Gln Ile Ile Lys Pro Leu Asp Val Cys
 65 70 75
 Cys Val Thr Lys Asn Leu Leu Ala Phe Tyr Val Asp Arg Val Phe
 80 85 90
 Lys Asp His Gln Glu Pro Asn Pro Lys Ile Leu Arg Lys Ile Ser
 95 100 105
 Ser Ile Ala Asn Ser Phe Leu Tyr Met Gln Lys Thr Leu Arg Gln
 110 115 120
 Cys Gln Glu Gln Arg Gln Cys His Cys Arg Gln Glu Ala Thr Asn
 125 130 135
 Ala Thr Arg Val Ile His Asp Asn Tyr Asp Gln Leu Glu Val His
 140 145 150
 Ala Ala Ala Ile Lys Ser Leu Gly Glu Leu Asp Val Phe Leu Ala
 155 160 165
 Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala
 170 175

<210> 85
 <211> 2137
 <212> DNA
 <213> Homo Sapien

<400> 85
 gctcccaagcc aagaacacctcg gggcccgctgc gcggtggggaa ggagttcccc 50
 gaaaccggc cgctaaggcga ggccctcctcc tcccgagat ccgaacggcc 100
 tggcggggtt caccgggct gggacaagaa gccgcccgcct gcctgcccgg 150
 gcccggggag ggggtgggg ctggggccgg aggcggggtg tgagtgggtg 200
 tgtgcggggg gcggaggctt gatgcaatcc cgataagaaa tgctcgggtg 250
 tcttggcac ctacccgtgg ggcccgtaag ggcgtactat ataaggctgc 300
 cggccggag ccgcggcgcc gtcagagcag gagcgctgcg tccaggatct 350
 agggccacga ccatccaaac ccggcactca cagccccgca ggcgcattccg 400
 gtgcggccc agcctccgc accccatcg ccggagctgc ggcgagagcc 450
 ccagggaggt gccatgcgga gcggtgtgt ggtggtccac gtatggatcc 500
 tggccggcct ctggctggcc gtggccgggc gccccctcgc cttctcggac 550
 gcggggccccc acgtgcacta cggctggggc gaccccatcc gcctgcggca 600
 cctgtacacc tccggccccc acgggctctc cagctgttcc ctgcgcattcc 650

tgccgcacgg cgtcggtggac tgccgcggg gccagagcgc gcacagttt 700
ctggagatca aggcagtcgc tctgcggacc gtggccatca agggcgtgca 750
cagcgtgcgg tacctctgca tggcgccga cggcaagatg caggggctgc 800
ttcagtactc ggaggaagac tgtgcttcg aggaggagat ccgcccagat 850
ggctacaatg tgtaccgatc cgagaagcac cgccctccgg tctccctgag 900
cagtgc当地 cagcggcagc tgtacaagaa cagaggctt cttccactct 950
ctcatttctt gccccatgctg cccatggtcc cagaggagcc tgaggacctc 1000
aggggccact tggaaatctga catgttctct tcgccccctgg agaccgacag 1050
catggaccca tttgggcttg tcaccggact ggaggccgtg aggagtccca 1100
gcttgagaa gtaactgaga ccatgcccgg gccttccac tgctgccagg 1150
ggctgtggta cctgcagcgt gggggacgtg cttctacaag aacagtccctg 1200
agtccacgtt ctgttagct ttaggaagaa acatctagaa gttgtacata 1250
ttcagagttt tccattggca gtgccagttt ctagccaata gacttgtctg 1300
atcataacat tgtaagcctg tagttgccc agctgctgcc tggccccca 1350
ttctgctccc tcgaggttgc tggacaagct gctgcactgt ctcagttctg 1400
cttgaataacc tccatcgatg gggaaactcac ttcccttgaa aaaattctta 1450
tgtcaagctg aaattctcta atttttctc atcacttccc caggagcagc 1500
cagaagacag gcagtagttt taatttcagg aacaggtgat ccactctgta 1550
aaacagcagg taaatttcac tcaaccccat gtgggaattt atctatatct 1600
ctacttccag ggaccatttgc cccttccaa atccctccag gccagaactg 1650
actggagcag gcatggccca ccaggcttca ggagtagggg aagcctggag 1700
ccccactcca gccctgggac aacttgagaa ttccccctga ggccagttct 1750
gtcatggatg ctgtcctgag aataacttgc tgtcccggtg tcacctgctt 1800
ccatctccca gcccaccaggc cctctgcccc cctcadatgc ctccccatgg 1850
attggggcctt cccaggcccc ccaccttatg tcaacctgca cttcttgg 1900
aaaaatcagg aaaagaaaag atttgaagac cccaaatgttt gtcaataact 1950
tgctgtgtgg aagcagcggg ggaagaccta gaacccttcc cccagcactt 2000
ggttttccaa catgatattt atgagtaatt tattttgata tgtacatctc 2050
ttatTTTCTT acattatTTA tgcccccaaa ttatatttat gtatgtaaat 2100

gaggtttggtt ttgttatatta aaatggagtt tgtttgt 2137

<210> 86

<211> 216

<212> PRT

<213> Homo Sapien

<400> 86

Met Arg Ser Gly Cys Val Val Val His Val Trp Ile Leu Ala Gly
1 5 10 15

Leu Trp Leu Ala Val Ala Gly Arg Pro Leu Ala Phe Ser Asp Ala
20 25 30

Gly Pro His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg
35 40 45

His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu
50 55 60

Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser
65 70 75

Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val
80 85 90

Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
95 100 105

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
110 115 120

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
125 130 135

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
140 145 150

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe
155 160 165

Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg
170 175 180

Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp
185 190 195

Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg
200 205 210

Ser Pro Ser Phe Glu Lys
215

<210> 87

<211> 26

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 87
atccgcccag atggctacaa tgtgta 26

<210> 88
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 88
gcctcccggt ctccctgagc agtgccaaac agcggcagtg ta 42

<210> 89
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 89
ccagtccggc gacaaggcca aa 22

<210> 90
<211> 1857
<212> DNA
<213> Homo Sapien

<400> 90
gtctgttccc aggagtctt cggcggctgt tgtgtcagtg gcctgatcgc 50
gatggggaca aaggcgcaag tcgagaggaa actgttgtgc ctcttcata 100
tggcgatcct gttgtgtcc ctggcattgg gcagtgttac agtgcactct 150
tctgaacctg aagtcaaat tcctgagaat aatcctgtga agttgtcctg 200
tgcctactcg ggctttctt ctccccgtgt ggagtggaag tttgaccaag 250
gagacaccac cagactcggt tgctataata acaagatcac agtttcctat 300
gaggaccggg tgaccttctt gccaactggc atcacctca agtccgtgac 350
acggaaagac actgggacat acacttgtat ggtctctgag gaaggcggca 400
acagctatgg ggaggtcaag gtcaagctca tcgtgcttgt gcctccatcc 450
aaggctacag ttaacatccc ctccctgtcc accattggga accggggcagt 500
gctgacatgc tcagaacaag atggttcccc accttctgaa tacacctgg 550
tcaaagatgg gatagtgtatc cctacgaatc ccaaaaagcac ccgtgccttc 600

agcaactctt cctatgtcct gaatcccaca acaggagagc tggtcttga 650
tccccgtca gcctctgata ctggagaata cagctgtgag gcacggaatg 700
ggtatggac acccatgact tcaaattgctg tgcgcatgga agctgtggag 750
cggaatgtgg gggtcacatgt ggcagccgtc cttgttaaccc tgattctcct 800
gggaatcttg gttttggca tctgggttgc ctatagccga ggcactttg 850
acagaacaaa gaaaggact tcgagtaaga aggtgattt aagccagcct 900
agtgcggaa gtgaaggaga attcaaacag acctcgcat tcctggtgt 950
agcctggtcg gctcaccgccc tatcatctgc atttgcotta ctcaggtgct 1000
accggactct ggccccctgat gtctgttagtt tcacaggatg ccttatttgc 1050
cttctacacc ccacagggcc ccctacttct tcggatgtgt ttttaataat 1100
gtcagctatg tgccccatcc tccttcatgc cctccctccc tttcctacca 1150
ctgctgagtg gcctggaact tgtttaaagt gtttattccc cattttttg 1200
agggatcagg aaggaatcct gggatgccat ttgacttccc ttctaaatgt 1250
acagcaaaaa tggcgggggt cgccaggaatc tgcactcaac tgcccacctg 1300
gctggcaggg atctttgaat aggtatcttgc agcttggttc tgggtcttt 1350
ccttgtgtac tgacgaccag ggccagctgt tctagagcgg gaatttagagg 1400
ctagagcggc tgaaatggtt gttgggtat gacactgggg tccttcatc 1450
tctggggccc actctcttct gtctccat gggaaatgtgcc actgggatcc 1500
ctctgcccctg tcctcctgaa tacaagctga ctgacattga ctgtgtctgt 1550
ggaaaaatggg agctcttggtt gtggagagca tagtaaattt tcagagaact 1600
tgaagccaaa aggatttaaa accgctgctc taaagaaaaag aaaactggag 1650
gctgggcgca gtggctcactg cctgtaatcc cagaggctga ggcaggcgg 1700
tcacctgagg tcgggagttc gggatcagcc tgaccaacat ggagaaaccc 1750
tactggaaat acaaagtttgc ccaggcatgg tggtgcatgc ctgtgtcc 1800
agctgctcag gagcctggca acaagagcaa aactccagct caaaaaaaaaa 1850
aaaaaaaa 1857

<210> 91
<211> 299
<212> PRT
<213> Homo Sapien

<400> 91

Met Gly Thr Lys Ala Gln Val Glu Arg Lys Leu Leu Cys Leu Phe
 1 5 10 15

Ile Leu Ala Ile Leu Leu Cys Ser Leu Ala Leu Gly Ser Val Thr
 20 25 30

Val His Ser Ser Glu Pro Glu Val Arg Ile Pro Glu Asn Asn Pro
 35 40 45

Val Lys Leu Ser Cys Ala Tyr Ser Gly Phe Ser Ser Pro Arg Val
 50 55 60

Glu Trp Lys Phe Asp Gln Gly Asp Thr Thr Arg Leu Val Cys Tyr
 65 70 75

Asn Asn Lys Ile Thr Ala Ser Tyr Glu Asp Arg Val Thr Phe Leu
 80 85 90

Pro Thr Gly Ile Thr Phe Lys Ser Val Thr Arg Glu Asp Thr Gly
 95 100 105

Thr Tyr Thr Cys Met Val Ser Glu Glu Gly Asn Ser Tyr Gly
 110 115 120

Glu Val Lys Val Lys Leu Ile Val Leu Val Pro Pro Ser Lys Pro
 125 130 135

Thr Val Asn Ile Pro Ser Ser Ala Thr Ile Gly Asn Arg Ala Val
 140 145 150

Leu Thr Cys Ser Glu Gln Asp Gly Ser Pro Pro Ser Glu Tyr Thr
 155 160 165

Trp Phe Lys Asp Gly Ile Val Met Pro Thr Asn Pro Lys Ser Thr
 170 175 180

Arg Ala Phe Ser Asn Ser Ser Tyr Val Leu Asn Pro Thr Thr Gly
 185 190 195

Glu Leu Val Phe Asp Pro Leu Ser Ala Ser Asp Thr Gly Glu Tyr
 200 205 210

Ser Cys Glu Ala Arg Asn Gly Tyr Gly Thr Pro Met Thr Ser Asn
 215 220 225

Ala Val Arg Met Glu Ala Val Glu Arg Asn Val Gly Val Ile Val
 230 235 240

Ala Ala Val Leu Val Thr Leu Ile Leu Leu Gly Ile Leu Val Phe
 245 250 255

Gly Ile Trp Phe Ala Tyr Ser Arg Gly His Phe Asp Arg Thr Lys
 260 265 270

Lys Gly Thr Ser Ser Lys Lys Val Ile Tyr Ser Gln Pro Ser Ala
 275 280 285

Arg Ser Glu Gly Glu Phe Lys Gln Thr Ser Ser Phe Leu Val

<210> 92
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 92
tcgcggagct gtgttctgtt tccc 24

<210> 93
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 93
tgatcgcgat ggggacaaag gcgcaagctc gagagggaaac ttttgtgcct 50

<210> 94
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 94
acacctgggtt caaagatggg 20

<210> 95
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 95
taggaagagt tgctgaaggc acgg 24

<210> 96
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 96
ttgccttact caggtgctac 20

<210> 97

<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 97
actcagcagt ggttagaaag 20

<210> 98
<211> 1200
<212> DNA
<213> Homo Sapien

<400> 98
cccacgcgtc cgaacctctc cagcgatggg agccgcccgc ctgctgccca 50
acctcactct gtgcttacag ctgctgattc tctgctgtca aactcagtagc 100
gtgagggacc agggcgccat gaccgaccag ctgagcaggc ggcagatccg 150
cgagtagccaa ctctacagca ggaccagtgg caagcacgtg caggtcacccg 200
ggcgtcgcat ctccgcccacc gccgaggacg gcaacaagtt tgccaagctc 250
atagtggaga cggacacggtt tggcagccgg gttcgcatca aaggggctga 300
gagtgagaag tacatctgtta tgaacaagag gggcaagctc atcgggaagc 350
ccagcgggaa gagcaaagac tgcgtttca cggagatcgt gctggagaac 400
aactatacgg cttccagaa cgccccgcac gagggcttgt tcattggcatt 450
cacgcggcag gggcgccccc gccaggcttc ccgcagccgc cagaaccagc 500
gcgaggccccca cttcatcaag cgcccttacc aaggccagct gcccttcccc 550
aaccacgcgg agaaggcagaa gcagttcgag tttgtgggtt ccgcggccac 600
ccgcccggacc aagcgcacac ggccggccccca gcccctcacg tagtctggga 650
ggcagggggc agcagccccct ggccggcctc cccacccctt tcccttctta 700
atccaaggac tgggctgggg tggcgggagg ggagccagat ccccgaggga 750
ggaccctgag ggccgcgaag catccgagcc cccagctggg aaggggcagg 800
ccgggtcccccc agggggcggtt ggcacagtgc ccccttccccg gacgggtggc 850
aggccctgga gaggaactga gtgtcaccct gatctcaggc caccagcctc 900
tgccggcctc ccagccgggc tcctgaagcc cgctgaaagg tcagcgactg 950
aaggccttgc agacaaccgt ctggaggtgg ctgtcctcaa aatctgcttc 1000
tcggatctcc ctcagtcgtc ccccgccccca caaactccctc ctggctagac 1050

tgttaggaagg gactttgtt tggggggggg aaagaaaagg 1100
agagagagga aaatagaggg ttgtccactc ctcacattcc acgaccagg 1150
cctgcacccc acccccaact cccagccccg gaataaaacc atttcctgc 1200

<210> 99
<211> 205
<212> PRT
<213> Homo Sapien

<400> 99
Met Gly Ala Ala Arg Leu Leu Pro Asn Leu Thr Leu Cys Leu Gln
1 5 10 15
Leu Leu Ile Leu Cys Cys Gln Thr Gln Tyr Val Arg Asp Gln Gly
20 25 30
Ala Met Thr Asp Gln Leu Ser Arg Arg Gln Ile Arg Glu Tyr Gln
35 40 45
Leu Tyr Ser Arg Thr Ser Gly Lys His Val Gln Val Thr Gly Arg
50 55 60
Arg Ile Ser Ala Thr Ala Glu Asp Gly Asn Lys Phe Ala Lys Leu
65 70 75
Ile Val Glu Thr Asp Thr Phe Gly Ser Arg Val Arg Ile Lys Gly
80 85 90
Ala Glu Ser Glu Lys Tyr Ile Cys Met Asn Lys Arg Gly Lys Leu
95 100 105
Ile Gly Lys Pro Ser Gly Lys Ser Lys Asp Cys Val Phe Thr Glu
110 115 120
Ile Val Leu Glu Asn Asn Tyr Thr Ala Phe Gln Asn Ala Arg His
125 130 135
Glu Gly Trp Phe Met Ala Phe Thr Arg Gln Gly Arg Pro Arg Gln
140 145 150
Ala Ser Arg Ser Arg Gln Asn Gln Arg Glu Ala His Phe Ile Lys
155 160 165
Arg Leu Tyr Gln Gly Gln Leu Pro Phe Pro Asn His Ala Glu Lys
170 175 180
Gln Lys Gln Phe Glu Phe Val Gly Ser Ala Pro Thr Arg Arg Thr
185 190 195
Lys Arg Thr Arg Arg Pro Gln Pro Leu Thr
200 205

<210> 100
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 100
cagtacgtga gggaccaggg cgccatga 28

<210> 101
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 101
ccggtgacct gcacgtgctt gccca 24

<210> 102
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<220>
<221> unsure
<222> 21
<223> unknown base

<400> 102
gcggatctgc cgcctgctca nctggtcggt catggcgccc t 41

<210> 103
<211> 1679
<212> DNA
<213> Homo Sapien

<400> 103
gttgtgtcct tcagcaaaac agtggattta aatctccctt cacaagcttg 50
agagcaacac aatcttatcg gaaagaaaaga aagaaaaaaaaa ccgaacctga 100
caaaaaagaa gaaaaagaag aagaaaaaaaaa atcatgaaaaa ccatccagcc 150
aaaaatgcac aattcttatct cttgggcaat ctgcacgggg ctggctgctc 200
tgtgtctctt ccaaggagtg cccgtgcgca gcggagatgc cacctcccc 250
aaagctatgg acaacgtgac ggtccggcag ggggagagcg ccaccctcag 300
gtgcactatt gacaaccggg tcacccgggt ggcctggcta aaccgcagca 350
ccatcctcta tgctggaat gacaagtggt gcctggatcc tcgcgtggtc 400
cttctgagca acacccaaac gcagttacagc atcgagatcc agaacgtgga 450
tgtgtatgac gagggccctt acacctgctc ggtgcagaca gacaaccacc 500

caaagacctc tagggccac ctcattgtgc aagtatctcc caaaattgta 550
gagatttctt cagatatctc catatatgaa gggacaata ttagcctcac 600
ctgcatacgca actggtagac cagagcctac ggtaacttgg agacacatct 650
ctcccaaagc ggttggctt gtgagtgaag acgaatactt ggaaattcag 700
ggcatcaccc gggagcagtc agggactac gagtgcagtg cctccaatga 750
cgtggccgcg cccgtggac ggagagtaaa ggtcaccgtg aactatccac 800
catacatttc agaagccaag ggtacaggtg tccccgtggg aaaaaagggg 850
acactgcagt gtgaagcctc agcagtcccc tcagcagaat tccagtggta 900
caaggatgac aaaagactga ttgaaggaaa gaaaggggtg aaagtggaaa 950
acagaccttt cctctcaaaa ctcatcttct tcaatgtctc tgaacatgac 1000
tatgggaact acacttgctg ggcctccaac aagctggcc acaccaatgc 1050
cagcatcatg ctatggc caggccgt cagcgaggtg agcaacggca 1100
cgtcgaggag ggcaggctgc gtctggctgc tgccctttct ggtcttgcac 1150
ctgcttctca aattttgatg tgagtgccac ttccccaccc gggaaaggct 1200
gccgccacca ccaccaccaa cacaacagca atggcaacac cgacagcaac 1250
caatcagata tatacaaatg aaattagaag aaacacagcc tcatggaca 1300
gaaatttgag ggaggggaac aaagaatact ttggggggaa aagagttta 1350
aaaaagaaaat tgaaaattgc cttgcagata tttaggtaca atggagttt 1400
ctttcccaa acgggaagaa cacagcacac ccggcttgaa cccactgcaa 1450
gtgcacgt gcaaccttt tggtgccagt gtggcaagg gctcagcctc 1500
tctgcccaca gagtgcccc acgtggaaca ttctggagct ggccatccca 1550
aattcaatca gtccatagag acgaacagaa tgagaccttc cggcccaagc 1600
gtggcgctgc gggcactttg gttagactgtg ccaccacggc gtgtgttgt 1650
aacgtgaaa taaaaagagc aaaaaaaaaa 1679

<210> 104
<211> 344
<212> PRT
<213> Homo Sapien

<400> 104
Met Lys Thr Ile Gln Pro Lys Met His Asn Ser Ile Ser Trp Ala
1 5 10 15
Ile Phe Thr Gly Leu Ala Ala Leu Cys Leu Phe Gln Gly Val Pro

20	25	30
Val Arg Ser Gly Asp Ala Thr Phe Pro Lys Ala Met Asp Asn Val		
35	40	45
Thr Val Arg Gln Gly Glu Ser Ala Thr Leu Arg Cys Thr Ile Asp		
50	55	60
Asn Arg Val Thr Arg Val Ala Trp Leu Asn Arg Ser Thr Ile Leu		
65	70	75
Tyr Ala Gly Asn Asp Lys Trp Cys Leu Asp Pro Arg Val Val Leu		
80	85	90
Leu Ser Asn Thr Gln Thr Gln Tyr Ser Ile Glu Ile Gln Asn Val		
95	100	105
Asp Val Tyr Asp Glu Gly Pro Tyr Thr Cys Ser Val Gln Thr Asp		
110	115	120
Asn His Pro Lys Thr Ser Arg Val His Leu Ile Val Gln Val Ser		
125	130	135
Pro Lys Ile Val Glu Ile Ser Ser Asp Ile Ser Ile Asn Glu Gly		
140	145	150
Asn Asn Ile Ser Leu Thr Cys Ile Ala Thr Gly Arg Pro Glu Pro		
155	160	165
Thr Val Thr Trp Arg His Ile Ser Pro Lys Ala Val Gly Phe Val		
170	175	180
Ser Glu Asp Glu Tyr Leu Glu Ile Gln Gly Ile Thr Arg Glu Gln		
185	190	195
Ser Gly Asp Tyr Glu Cys Ser Ala Ser Asn Asp Val Ala Ala Pro		
200	205	210
Val Val Arg Arg Val Lys Val Thr Val Asn Tyr Pro Pro Tyr Ile		
215	220	225
Ser Glu Ala Lys Gly Thr Gly Val Pro Val Gly Gln Lys Gly Thr		
230	235	240
Leu Gln Cys Glu Ala Ser Ala Val Pro Ser Ala Glu Phe Gln Trp		
245	250	255
Tyr Lys Asp Asp Lys Arg Leu Ile Glu Gly Lys Lys Gly Val Lys		
260	265	270
Val Glu Asn Arg Pro Phe Leu Ser Lys Leu Ile Phe Phe Asn Val		
275	280	285
Ser Glu His Asp Tyr Gly Asn Tyr Thr Cys Val Ala Ser Asn Lys		
290	295	300
Leu Gly His Thr Asn Ala Ser Ile Met Leu Phe Gly Pro Gly Ala		
305	310	315

Val Ser Glu Val Ser Asn Gly Thr Ser Arg Arg Ala Gly Cys Val
320 325 330

Trp Leu Leu Pro Leu Leu Val Leu His Leu Leu Leu Lys Phe
335 340

<210> 105

<211> 1734

<212> DNA

<213> Homo Sapien

<400> 105

gtggactctg agaagccag gcagttgagg acaggagaga gaaggctgca 50
gaccagagg gagggaggac agggagtcgg aaggaggagg acagaggagg 100
gcacagagac gcagagcaag ggccgcaagg aggagacctt ggtggagga 150
agacactctg gagagagagg gggctggca gagatgaagt tccagggcc 200
cctggcctgc ctccctgctgg ccctctgcct gggcagtggg gaggctggcc 250
ccctgcagag cggagaggaa agcaactggaa caaatattgg ggaggccctt 300
ggacatggcc tgggagacgc cctgagcgaa ggggtggaa aggccattgg 350
caaagaggcc ggaggggcag ctggctctaa agtcagttag gcccattggcc 400
aagggaccag agaagcagtt ggcaactggag tcaggcaggt tccaggcttt 450
ggcgcagcag atgctttggg caacagggtc ggggaagcag cccatgctct 500
ggaaacact gggcacgaga ttggcagaca ggcagaagat gtcattcgac 550
acggagcaga tgctgtccgc ggctcctggc aggggtgcc tggccacagt 600
ggtgcttggg aaacttctgg aggccatggc atctttggct ctaagggtgg 650
cctggaggc cagggccagg gcaatcctgg aggtctgggg actccgtggg 700
tccacggata ccccgaaac tcagcaggca gctttggaaat gaatcctcag 750
ggagctccct ggggtcaagg aggcaatggc gggccaccaa actttggac 800
caacactcag ggagctgtgg cccagcctgg ctatggttca gtgagagcca 850
gcaaccagaa tgaaggggtgc acgaatcccc caccatctgg ctcaggtgg 900
ggctccagca actctggggg aggcaagcggc tcacagtcgg gcagcagtgg 950
cagtggcagc aatggtgaca acaacaatgg cagcagcagt ggtggcagca 1000
gcagtggcag cagcagtggc agcagcagtgc gcggcagcag tggcggcagc 1050
agtggtgcc gcaagtggca cagtggtgcc agcagaggtg acagcggcag 1100
tgagtccctcc tggggatcca gcaccggctc ctccctccggc aaccacggtg 1150

ggagcggcgg aggaaatgga cataaaccgg ggtgtaaaaa gccagggaat 1200
gaagcccgcg ggagcgggaa atctggatt caggcttca gaggacaggg 1250
agtttccagc aacatgaggg aaataagcaa agagggcaat cgccctccttg 1300
gaggctctgg agacaattat cggggcaag ggtcgagctg gggcagtgg 1350
ggaggtgacg ctgttggtgg agtcaatact gtgaactctg agacgtctcc 1400
tggatgttt aactttgaca cttctggaa gaattttaaa tccaagctgg 1450
gtttcatcaa ctgggatgcc ataaacaagg accagagaag ctctcgcatc 1500
ccgtgaccc cagacaagga gccaccagat tggatggag cccccacact 1550
ccctccttaa aacaccaccc tctcatcaact aatctcagcc cttgccttg 1600
aaataaacct tagctgcccc aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1700
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1734

<210> 106

<211> 440

<212> PRT

<213> Homo Sapien

<400> 106

Met	Lys	Phe	Gln	Gly	Pro	Leu	Ala	Cys	Leu	Leu	Leu	Ala	Leu	Cys
1					5				10				15	

Leu	Gly	Ser	Gly	Glu	Ala	Gly	Pro	Leu	Gln	Ser	Gly	Glu	Glu	Ser
					20				25				30	

Thr	Gly	Thr	Asn	Ile	Gly	Glu	Ala	Leu	Gly	His	Gly	Leu	Gly	Asp
					35				40				45	

Ala	Leu	Ser	Glu	Gly	Val	Gly	Lys	Ala	Ile	Gly	Lys	Glu	Ala	Gly
					50				55				60	

Gly	Ala	Ala	Gly	Ser	Lys	Val	Ser	Glu	Ala	Leu	Gly	Gln	Gly	Thr
					65				70				75	

Arg	Glu	Ala	Val	Gly	Thr	Gly	Val	Arg	Gln	Val	Pro	Gly	Phe	Gly
					80				85				90	

Ala	Ala	Asp	Ala	Leu	Gly	Asn	Arg	Val	Gly	Glu	Ala	Ala	His	Ala
					95				100				105	

Leu	Gly	Asn	Thr	Gly	His	Glu	Ile	Gly	Arg	Gln	Ala	Glu	Asp	Val
					110				115				120	

Ile	Arg	His	Gly	Ala	Asp	Ala	Val	Arg	Gly	Ser	Trp	Gln	Gly	Val
					125				130				135	

Pro Gly His Ser Gly Ala Trp Glu Thr Ser Gly Gly His Gly Ile

140	145	150												
Phe	Gly	Ser	Gln	Gly	Gly	Leu	Gly	Gly	Gln	Gly	Gln	Gly	Asn	Pro
			155				160			165				
Gly	Gly	Leu	Gly	Thr	Pro	Trp	Val	His	Gly	Tyr	Pro	Gly	Asn	Ser
		170					175			180				
Ala	Gly	Ser	Phe	Gly	Met	Asn	Pro	Gln	Gly	Ala	Pro	Trp	Gly	Gln
			185				190			195				
Gly	Gly	Asn	Gly	Gly	Pro	Pro	Asn	Phe	Gly	Thr	Asn	Thr	Gln	Gly
			200				205			210				
Ala	Val	Ala	Gln	Pro	Gly	Tyr	Gly	Ser	Val	Arg	Ala	Ser	Asn	Gln
			215				220			225				
Asn	Glu	Gly	Cys	Thr	Asn	Pro	Pro	Pro	Ser	Gly	Ser	Gly	Gly	Gly
			230				235			240				
Ser	Ser	Asn	Ser	Gly	Gly	Ser	Gly	Ser	Gln	Ser	Gly	Ser	Ser	Ser
			245				250			255				
Gly	Ser	Gly	Ser	Asn	Gly	Asp	Asn	Asn	Gly	Ser	Ser	Ser	Gly	
			260				265			270				
Gly	Ser	Ser	Ser	Gly	Ser	Ser	Ser	Gly	Ser	Ser	Ser	Gly	Gly	Ser
			275				280			285				
Ser	Gly	Gly	Ser	Ser	Gly	Ser	Ser	Gly	Asn	Ser	Gly	Gly	Ser	
			290				295			300				
Arg	Gly	Asp	Ser	Gly	Ser	Glu	Ser	Ser	Trp	Gly	Ser	Ser	Thr	Gly
			305				310			315				
Ser	Ser	Ser	Gly	Asn	His	Gly	Gly	Ser	Gly	Gly	Asn	Gly	His	
			320				325			330				
Lys	Pro	Gly	Cys	Glu	Lys	Pro	Gly	Asn	Glu	Ala	Arg	Gly	Ser	Gly
			335				340			345				
Glu	Ser	Gly	Ile	Gln	Gly	Phe	Arg	Gly	Gln	Gly	Val	Ser	Ser	Asn
			350				355			360				
Met	Arg	Glu	Ile	Ser	Lys	Glu	Gly	Asn	Arg	Leu	Leu	Gly	Gly	Ser
			365				370			375				
Gly	Asp	Asn	Tyr	Arg	Gly	Gln	Gly	Ser	Ser	Trp	Gly	Ser	Gly	Gly
			380				385			390				
Gly	Asp	Ala	Val	Gly	Gly	Val	Asn	Thr	Val	Asn	Ser	Glu	Thr	Ser
			395				400			405				
Pro	Gly	Met	Phe	Asn	Phe	Asp	Thr	Phe	Trp	Lys	Asn	Phe	Lys	Ser
			410				415			420				
Lys	Leu	Gly	Phe	Ile	Asn	Trp	Asp	Ala	Ile	Asn	Lys	Asp	Gln	Arg
			425				430			435				

Ser Ser Arg Ile Pro
440

<210> 107

<211> 918

<212> DNA

<213> Homo Sapien

<400> 107

agccaggcag cacatcacag cgggaggagc tgtcccaggt ggcccagctc 50
agcaatggca atgggggtcc ccagagtcat tctgctotgc ctcttgggg 100
ctgcgtctg cctgacaggg tcccaagccc tgcaigtgcta cagcttttag 150
cacacctact ttggccctt tgacctcagg gccatgaagc tgcccagcat 200
ctccgtctt catgagtgtt ttgaggctat cctgtctctg gacaccgggt 250
atcgcgccgc ggtgaccctg gtgcggaaagg gctgctggac cgggcctcct 300
gcgggccaga cgcaatcgaa cccggacgacg ctgccccccag actactcggt 350
ggtgccggc tgcacaactg acaaattgcaa cgccccacctc atgactcatg 400
acgcctccc caacctgagc caagcaccctg acccgccgac gtcagcggc 450
gccgagtgtt acgcctgtat cgggtccac caggatgact gctatcggt 500
caggtcccga cgagtccagt gtcaccagga ccagaccggc tggttccagg 550
gcagtggcag aatgacagtt ggcaatttct cagtcctgtt gtacatcaga 600
acctgccacc ggccctcctg caccaccgag ggcaccacca gcccctggac 650
agccatcgac ctccagggtt cctgctgtga ggggtacctc tgcaacagga 700
aatccatgac ccagcccttc accagtgtttt cagccaccac ccctccccga 750
gcactacagg tcctggccct gtcctccca gtcctcctgc tgggtgggtt 800
ctcagcatag accgccccctc caggatgctg gggacagggc tcacacacct 850
cattcttgct gttcagccc ctatcacata gtcactgga aaatgatgtt 900
aaagtaagaa ttgcaaaa 918

<210> 108

<211> 251

<212> PRT

<213> Homo Sapien

<400> 108

Met	Ala	Met	Gly	Val	Pro	Arg	Val	Ile	Leu	Leu	Cys	Leu	Phe	Gly
1				5				10				15		

Ala	Ala	Leu	Cys	Leu	Thr	Gly	Ser	Gln	Ala	Leu	Gln	Cys	Tyr	Ser
				20				25				30		

Phe Glu His Thr Tyr Phe Gly Pro Phe Asp Leu Arg Ala Met Lys
 35 40 45
 Leu Pro Ser Ile Ser Cys Pro His Glu Cys Phe Glu Ala Ile Leu
 50 55 60
 Ser Leu Asp Thr Gly Tyr Arg Ala Pro Val Thr Leu Val Arg Lys
 65 70 75
 Gly Cys Trp Thr Gly Pro Pro Ala Gly Gln Thr Gln Ser Asn Pro
 80 85 90
 Asp Ala Leu Pro Pro Asp Tyr Ser Val Val Arg Gly Cys Thr Thr
 95 100 105
 Asp Lys Cys Asn Ala His Leu Met Thr His Asp Ala Leu Pro Asn
 110 115 120
 Leu Ser Gln Ala Pro Asp Pro Pro Thr Leu Ser Gly Ala Glu Cys
 125 130 135
 Tyr Ala Cys Ile Gly Val His Gln Asp Asp Cys Ala Ile Gly Arg
 140 145 150
 Ser Arg Arg Val Gln Cys His Gln Asp Gln Thr Ala Cys Phe Gln
 155 160 165
 Gly Ser Gly Arg Met Thr Val Gly Asn Phe Ser Val Pro Val Tyr
 170 175 180
 Ile Arg Thr Cys His Arg Pro Ser Cys Thr Thr Glu Gly Thr Thr
 185 190 195
 Ser Pro Trp Thr Ala Ile Asp Leu Gln Gly Ser Cys Cys Glu Gly
 200 205 210
 Tyr Leu Cys Asn Arg Lys Ser Met Thr Gln Pro Phe Thr Ser Ala
 215 220 225
 Ser Ala Thr Thr Pro Pro Arg Ala Leu Gln Val Leu Ala Leu Leu
 230 235 240
 Leu Pro Val Leu Leu Val Gly Leu Ser Ala
 245 250

<210> 109
 <211> 1813
 <212> DNA
 <213> Homo Sapien

<400> 109
 ggagccgccc tgggtgtcag cggatcggtc cccgcgcacg ctccggccgt 50
 cgccgcaggct cggcacctgc aggtccgtgc gtccccggc tgccgcacct 100
 gactccgtcc cggccaggga gggccatgtat ttccctcccg gggccctgg 150
 tgaccaactt gctgcggttt ttgttcctgg ggctgagtgc cctcgcgccc 200

卷之三

ccctcgcccc cccagctgca actgcacttg cccgccaacc ggttgcaggc 250
ggtggaggga gggaaagtgg tgcttcagc gtgg tacacc ttgcacgggg 300
aggtgtcttc atcccagcca tggaggtgc ctttgat gtggttcttc 350
aacacaaaag aaaaggagga tcaggtgttgc tcctacatca atgggtcac 400
aacaagcaaa cctggagttat cttggctta ctccatgccccc tcccgaaacc 450
tgtccctgcg gctggagggt ctccaggaga aagactctgg cccctacagc 500
tgctccgtga atgtcaaga caaacaaggc aaatcttaggg gccacagcat 550
caaaacctta gaactcaatg tactggttcc tccagctcct ccattctgcc 600
gtctccagggt tgccat gtggggcaa acgtgaccct gagctgccag 650
tctccaagga gtaagccccgc tgtccaatac cagtggatc ggcagcttcc 700
atccttccag actttcttgc caccagcatt agatgtcatc cgtgggtctt 750
taaggcctcac caaccttgc tctccatgg ctggagtcata tgtctgcaag 800
gcccacaatg aggtgggcac tgcccaatgt aatgtgacgc tggaagttag 850
cacagggcct ggagctgcag tggttgctgg agctgttgtag ggtaccctgg 900
ttggactggg gttgctggct gggctggcc tcttgatcca ccggccggggc 950
aaggccctgg aggagccagc caatgatatac aaggaggatg ccattgtcc 1000
ccggaccctg ccctggccca agagctcaga cacaatctcc aagaatggga 1050
ccctttccctc tgtcacctcc gcacgagccc tccggccacc ccatggccct 1100
cccaggcctg gtgcattgac ccccacgccc agtctctcca gccaggccct 1150
gccctcacca agactgcccac cgacagatgg ggcccaccct caaccaatat 1200
cccccatccc tggtggtt tcttcctctg gcttgagccg catgggtgct 1250
gtgcctgtga tggtgctgc ccagagtcaa gctggctctc tggtatgtg 1300
accccaccac tcattggcta aaggatttgg ggtctctcct tcctataagg 1350
gtcacctcta gcacagaggc ctgagtcata gaaaaagatc acactcctga 1400
cccttagtac tctggccca cctctttta ctgtggaaa accatctcag 1450
taagacctaa gtgtccagga gacagaagga gaagaggaag tggatctgga 1500
attggagga gcctccaccc acccctgact ctccttatg aagccagctg 1550
ctgaaattag ctactcacca agagtggaggg gcagagactt ccagtcactg 1600
agtctccag gcccccttga tctgtacccc acccctatct aacaccaccc 1650

ttggctcca ctccagctcc ctgtattgat ataacctgac aggctggctt 1700
ggtaggttt tactggggca gaggataggg aatcttttat taaaactaac 1750
atgaaatatg tggtgtttc atttgcaaata taaaataaag atacataatg 1800
tttgatgaa aaa 1813

<210> 110
<211> 390
<212> PRT
<213> Homo Sapien

<400> 110
Met Ile Ser Leu Pro Gly Pro Leu Val Thr Asn Leu Leu Arg Phe
1 5 10 15
Leu Phe Leu Gly Leu Ser Ala Leu Ala Pro Pro Ser Arg Ala Gln
20 25 30
Leu Gln Leu His Leu Pro Ala Asn Arg Leu Gln Ala Val Glu Gly
35 40 45
Gly Glu Val Val Leu Pro Ala Trp Tyr Thr Leu His Gly Glu Val
50 55 60
Ser Ser Ser Gln Pro Trp Glu Val Pro Phe Val Met Trp Phe Phe
65 70 75
Lys Gln Lys Glu Lys Glu Asp Gln Val Leu Ser Tyr Ile Asn Gly
80 85 90
Val Thr Thr Ser Lys Pro Gly Val Ser Leu Val Tyr Ser Met Pro
95 100 105
Ser Arg Asn Leu Ser Leu Arg Leu Glu Gly Leu Gln Glu Lys Asp
110 115 120
Ser Gly Pro Tyr Ser Cys Ser Val Asn Val Gln Asp Lys Gln Gly
125 130 135
Lys Ser Arg Gly His Ser Ile Lys Thr Leu Glu Leu Asn Val Leu
140 145 150
Val Pro Pro Ala Pro Pro Ser Cys Arg Leu Gln Gly Val Pro His
155 160 165
Val Gly Ala Asn Val Thr Leu Ser Cys Gln Ser Pro Arg Ser Lys
170 175 180
Pro Ala Val Gln Tyr Gln Trp Asp Arg Gln Leu Pro Ser Phe Gln
185 190 195
Thr Phe Phe Ala Pro Ala Leu Asp Val Ile Arg Gly Ser Leu Ser
200 205 210
Leu Thr Asn Leu Ser Ser Ser Met Ala Gly Val Tyr Val Cys Lys
215 220 225

Ala His Asn Glu Val Gly Thr Ala Gln Cys Asn Val Thr Leu Glu
 230 235 240
 Val Ser Thr Gly Pro Gly Ala Ala Val Val Ala Gly Ala Val Val
 245 250 255
 Gly Thr Leu Val Gly Leu Gly Leu Ala Gly Leu Val Leu Leu
 260 265 270
 Tyr His Arg Arg Gly Lys Ala Leu Glu Glu Pro Ala Asn Asp Ile
 275 280 285
 Lys Glu Asp Ala Ile Ala Pro Arg Thr Leu Pro Trp Pro Lys Ser
 290 295 300
 Ser Asp Thr Ile Ser Lys Asn Gly Thr Leu Ser Ser Val Thr Ser
 305 310 315
 Ala Arg Ala Leu Arg Pro Pro His Gly Pro Pro Arg Pro Gly Ala
 320 325 330
 Leu Thr Pro Thr Pro Ser Leu Ser Ser Gln Ala Leu Pro Ser Pro
 335 340 345
 Arg Leu Pro Thr Thr Asp Gly Ala His Pro Gln Pro Ile Ser Pro
 350 355 360
 Ile Pro Gly Gly Val Ser Ser Ser Gly Leu Ser Arg Met Gly Ala
 365 370 375
 Val Pro Val Met Val Pro Ala Gln Ser Gln Ala Gly Ser Leu Val
 380 385 390

<210> 111
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 111
 agggtctcca ggagaaaagac tc 22

<210> 112
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 112
 atttgtggcc ttgcagacat agac 24

<210> 113
 <211> 50
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 113

ggccacagca tcaaaacctt agaactcaat gtactggttc ctccagctcc 50

<210> 114

<211> 2479

<212> DNA

<213> Homo Sapien

<400> 114

acctgcccattt acctgttgcg agtgtggaaa aattctccct gttgaatttt 50

ttgcacatgg aggacagcag caaagagggc aacacaggct gataagacca 100

gagacagcag ggagattatt ttaccatacg ccctcaggac gttccctcta 150

gctggagttc tggacttcaa cagaacccca tccagtctt ttgattttgc 200

tgtttatattt ttttttcattt ttcttttcc caccacattt tattttatattt 250

ccgtacttca gaaatgggcc tacagaccac aaagtggccc agccatgggg 300

ctttttccctt gaagtcttgg cttatcattt ccctggggctt ctactcacag 350

gtgtccaaac tcctggcctg cccttagtgc tgccgctgcg acaggaactt 400

tgtctactgt aatgagcgaa gcttgacctc agtgcctttt gggatcccg 450

agggcgtaac cgtaacttac ctccacaaca accaaattaa taatgctgga 500

tttcctgcag aactgcacaa tgtacagtgc gtgcacacgg tctacctgta 550

tggcaaccaa ctggacgaat tccccatgaa cttcccaag aatgtcagag 600

ttctccattt gcaggaaaac aatattcaga ccatttcacg ggctgctttt 650

gcccgactct tgaagcttga agagctgcac ctggatgaca actccatatac 700

cacagtgggg gtggaaagacg gggccttccg ggaggctatt agcctcaaatt 750

tgttgtttt gtctaagaat cacctgagca gtgtgcctgt tggcttcctt 800

gtggacttgc aagagctgag agtggatgaa aatcgaatttgc ctgtcatatac 850

cgacatggcc ttccagaatc tcacgagctt ggagcgtttt attgtggacg 900

ggaacctcctt gaccaacaag ggtatcgccg agggcacctt cagccatctc 950

accaagctca aggaattttc aattgtacgt aattcgtgtt cccaccctcc 1000

tcccgatctc ccaggtacgc atctgatcag gctctatttgc caggacaacc 1050

agataaacca cattccttttgc acagccttctt caaatctgcg taagctggaa 1100

cggtggata tatccaacaa ccaactgcgg atgctgactc aagggtttt 1150
tgataatctc tccaacatga agcagtcac tgctcgaaat aacccttgg 1200
tttgtactg cagtattaaa tggtcacag aatggctcaa atatatccct 1250
tcatctctca acgtgcgggg tttcatgtgc caaggtcctg aacaagtccg 1300
gggatggcc gtcagggaat taaatatgaa tctttgtcc tgtcccacca 1350
cgacccccgg cctgcctctc ttccacccag ccccaagttac agcttctccg 1400
accactcagc ctcccacccct ctctattcca aacccttagca gaagctacac 1450
gcctccaact cctaccacat cgaaacttcc cacgattcct gactggatg 1500
gcagagaaag agtgaccaca cctatttctg aacggatcca gctctctatc 1550
cattttgtga atgataacttc cattcaagtc agctggctct ctctcttac 1600
cgtgatggca tacaaactca catgggtgaa aatggccac agtttagtag 1650
ggggcatcgt tcaggagcgc atagtcagcg gtgagaagca acacctgagc 1700
ctggtaact tagagcccg atccacctat cggatttgtt tagtgcact 1750
ggatgcttt aactaccgcg cggtagaaga caccattgt tcagaggcca 1800
ccacccatgc ctccatatctg aacaacggca gcaacacagc gtccagccat 1850
gagcagacga cgtcccacag catgggtcc cccttctgc tggcggcatt 1900
gatcgggggc gcggtgatat ttgtgctggt ggtttgctc agcgtcttt 1950
gctggcatat gcacaaaaag gggcgctaca cctccagaa gtggaaatac 2000
aaccggggcc ggcggaaaga tgattattgc gaggcaggca ccaagaagga 2050
caactccatc ctggagatga cagaaaccag tttcagatc gtctccttaa 2100
ataacgatca actccttaaa ggagattca gactgcagcc catttacacc 2150
ccaaatgggg gcattaatta cacagactgc catatcccc acaacatgcg 2200
atactgcaac agcagcgtgc cagacctgga gcactgccat acgtgacagc 2250
cagaggccca gcgttatcaa ggcggacaat tagactcttgc agaacacact 2300
cgtgtgtgca cataaagaca cgcagattac atttgataaa ttttacacag 2350
atgcatttgt gcatttgaat actctgtaat ttatacggtg tactatataa 2400
tgggatttaa aaaaagtgc atctttcta tttcaagtttta attacaaaca 2450
gttttgcac tctttgtttt ttaaatctt 2479

<210> 115
<211> 660

<212> PRT

<213> Homo Sapien

<400> 115

Met	Gly	Leu	Gln	Thr	Thr	Lys	Trp	Pro	Ser	His	Gly	Ala	Phe	Phe
1				5				10					15	
Leu	Lys	Ser	Trp	Leu	Ile	Ile	Ser	Leu	Gly	Leu	Tyr	Ser	Gln	Val
	20						25						30	
Ser	Lys	Leu	Leu	Ala	Cys	Pro	Ser	Val	Cys	Arg	Cys	Asp	Arg	Asn
	35						40					45		
Phe	Val	Tyr	Cys	Asn	Glu	Arg	Ser	Leu	Thr	Ser	Val	Pro	Leu	Gly
	50						55					60		
Ile	Pro	Glu	Gly	Val	Thr	Val	Leu	Tyr	Leu	His	Asn	Asn	Gln	Ile
	65						70					75		
Asn	Asn	Ala	Gly	Phe	Pro	Ala	Glu	Leu	His	Asn	Val	Gln	Ser	Val
	80						85					90		
His	Thr	Val	Tyr	Leu	Tyr	Gly	Asn	Gln	Leu	Asp	Glu	Phe	Pro	Met
	95						100					105		
Asn	Leu	Pro	Lys	Asn	Val	Arg	Val	Leu	His	Leu	Gln	Glu	Asn	Asn
	110						115					120		
Ile	Gln	Thr	Ile	Ser	Arg	Ala	Ala	Leu	Ala	Gln	Leu	Leu	Lys	Leu
	125						130					135		
Glu	Glu	Leu	His	Leu	Asp	Asp	Asn	Ser	Ile	Ser	Thr	Val	Gly	Val
	140						145					150		
Glu	Asp	Gly	Ala	Phe	Arg	Glu	Ala	Ile	Ser	Leu	Lys	Leu	Leu	Phe
	155						160					165		
Leu	Ser	Lys	Asn	His	Leu	Ser	Ser	Val	Pro	Val	Gly	Leu	Pro	Val
	170						175					180		
Asp	Leu	Gln	Glu	Leu	Arg	Val	Asp	Glu	Asn	Arg	Ile	Ala	Val	Ile
	185						190					195		
Ser	Asp	Met	Ala	Phe	Gln	Asn	Leu	Thr	Ser	Leu	Glu	Arg	Leu	Ile
	200						205					210		
Val	Asp	Gly	Asn	Leu	Leu	Thr	Asn	Lys	Gly	Ile	Ala	Glu	Gly	Thr
	215						220					225		
Phe	Ser	His	Leu	Thr	Lys	Leu	Lys	Glu	Phe	Ser	Ile	Val	Arg	Asn
	230						235					240		
Ser	Leu	Ser	His	Pro	Pro	Pro	Asp	Leu	Pro	Gly	Thr	His	Leu	Ile
	245						250					255		
Arg	Leu	Tyr	Leu	Gln	Asp	Asn	Gln	Ile	Asn	His	Ile	Pro	Leu	Thr
	260						265					270		

Ala Phe Ser Asn Leu Arg Lys Leu Glu Arg Leu Asp Ile Ser Asn
 275 280 285
 Asn Gln Leu Arg Met Leu Thr Gln Gly Val Phe Asp Asn Leu Ser
 290 295 300
 Asn Leu Lys Gln Leu Thr Ala Arg Asn Asn Pro Trp Phe Cys Asp
 305 310 315
 Cys Ser Ile Lys Trp Val Thr Glu Trp Leu Lys Tyr Ile Pro Ser
 320 325 330
 Ser Leu Asn Val Arg Gly Phe Met Cys Gln Gly Pro Glu Gln Val
 335 340 345
 Arg Gly Met Ala Val Arg Glu Leu Asn Met Asn Leu Leu Ser Cys
 350 355 360
 Pro Thr Thr Thr Pro Gly Leu Pro Leu Phe Thr Pro Ala Pro Ser
 365 370 375
 Thr Ala Ser Pro Thr Thr Gln Pro Pro Thr Leu Ser Ile Pro Asn
 380 385 390
 Pro Ser Arg Ser Tyr Thr Pro Pro Thr Pro Thr Ser Lys Leu
 395 400 405
 Pro Thr Ile Pro Asp Trp Asp Gly Arg Glu Arg Val Thr Pro Pro
 410 415 420
 Ile Ser Glu Arg Ile Gln Leu Ser Ile His Phe Val Asn Asp Thr
 425 430 435
 Ser Ile Gln Val Ser Trp Leu Ser Leu Phe Thr Val Met Ala Tyr
 440 445 450
 Lys Leu Thr Trp Val Lys Met Gly His Ser Leu Val Gly Gly Ile
 455 460 465
 Val Gln Glu Arg Ile Val Ser Gly Glu Lys Gln His Leu Ser Leu
 470 475 480
 Val Asn Leu Glu Pro Arg Ser Thr Tyr Arg Ile Cys Leu Val Pro
 485 490 495
 Leu Asp Ala Phe Asn Tyr Arg Ala Val Glu Asp Thr Ile Cys Ser
 500 505 510
 Glu Ala Thr Thr His Ala Ser Tyr Leu Asn Asn Gly Ser Asn Thr
 515 520 525
 Ala Ser Ser His Glu Gln Thr Thr Ser His Ser Met Gly Ser Pro
 530 535 540
 Phe Leu Leu Ala Gly Leu Ile Gly Gly Ala Val Ile Phe Val Leu
 545 550 555
 Val Val Leu Leu Ser Val Phe Cys Trp His Met His Lys Lys Gly

	560	565	570
Arg Tyr Thr Ser Gln Lys Trp Lys Tyr Asn Arg Gly Arg Arg Lys			
575	580	585	
Asp Asp Tyr Cys Glu Ala Gly Thr Lys Lys Asp Asn Ser Ile Leu			
590	595	600	
Glu Met Thr Glu Thr Ser Phe Gln Ile Val Ser Leu Asn Asn Asp			
605	610	615	
Gln Leu Leu Lys Gly Asp Phe Arg Leu Gln Pro Ile Tyr Thr Pro			
620	625	630	
Asn Gly Gly Ile Asn Tyr Thr Asp Cys His Ile Pro Asn Asn Met			
635	640	645	
Arg Tyr Cys Asn Ser Ser Val Pro Asp Leu Glu His Cys His Thr			
650	655	660	

<210> 116
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 116
cggtctacct gtatggcaac c 21

<210> 117
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 117
gcaggacaac cagataaaacc ac 22

<210> 118
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 118
acgcagattt gagaaggctg tc 22

<210> 119
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 119
ttcacgggct gctcttgccc agctcttcaa gcttgaagag ctgcac 46

<210> 120
<211> 2857
<212> DNA
<213> Homo Sapien

<400> 120
tgaagagtaa tagttgaaat caaaagagtc aacgcaatga actgttattt 50
actgctgcgt tttatgttgg gaattcctct cctatggcct tgtcttggag 100
caacagaaaa ctctcaaaca aagaaagtca agcagccagt gcgatctcat 150
ttgagagtga agcgtggctg ggtgtggAAC caatTTTtG taccagagga 200
aatgaatacg actagtcATC acatcggcca gctaagatct gatttagaca 250
atggaaacaa ttctttccag tacaagcttt tgggagctgg agctggaagt 300
acttttatca ttgatgaaag aacaggtgac atatatgccA tacagaagct 350
tgatagagag gagcgatccc tctacatctt aagagcccAG gtaatagaca 400
tcgctactgg aagggtgtg gaacctgagt ctgagttgt catcaaagtt 450
tcggatatacA atgacaatga accaaaattc ctagatgaac cttatgaggc 500
cattgtacca gagatgtctc cagaaggaac attagttatc caggtgacag 550
caagtgtatgc tgacgatccc tcaagtggta ataatgctcg tctcctctac 600
agcttacttc aaggccagcc atatTTTctt gttgaaccaa caacaggagt 650
cataagaata tcttctaaaaa tggatagaga actgcaagat gagtattggg 700
taatcattca agccaaaggac atgattggtc agccaggAGC gttgtctggA 750
acaacaagtG tattaattaa actttcagat gttaatgaca ataagcctat 800
attnaaagaa agtttatacc gcttgactgt ctctgaatct gcacccactg 850
ggacttctat aggaacaatc atggcatatg ataatgacat aggagagaat 900
gcagaaaatgg attacagcat tgaagaggat gattcgAAA catttgacat 950
tattactaat catgaaaACTC aagaaggaat agttatatta aaaaagaaag 1000
tggattttga gcaccagaac cactacggta tttagagcaa agttaaaaac 1050
catcatgttc ctgagcagct catgaagtac cacactgagg cttccaccac 1100
tttcattaaag atccagggtgg aagatgttga tgagcctcct ctttcctcc 1150

HUMAN GENOME

ttccatatta tgtatttcaa gttttgaag aaacccaca gggatcattt 1200
gtaggcgtgg tgtctgccac agacccagac aatagggaaat ctcctatcg 1250
gtattctatt actaggagca aagtgttcaa tatcaatgtat aatggtacaa 1300
tcactacaag taactcactg gatcgtgaaa tcagtgcctg gtacaaccta 1350
agtattacag ccacagaaaa atacaatata gaacagatct ctgcgtccc 1400
actgtatgtg caagttctta acatcaatga tcatgctcct gagttctctc 1450
aatactatga gacttatgtt tgtgaaaatg caggctctgg tcaggtaatt 1500
cagactatca gtgcagtgg tagagatgaa tccatagaag agcaccattt 1550
ttacttaat ctatctgttag aagacactaa caattcaagt ttacaatca 1600
tagataatca agataacaca gctgtcattt tgactaatag aactggttt 1650
aaccttcaag aagaacctgt cttctacatc tccatcttaa ttgcccacaa 1700
tggaatcccc tcacttacaa gtacaaacac ccttaccatc catgtctgtg 1750
actgtggtga cagtgggagc acacagacct gccagttacca ggagcttgc 1800
cttccatgg gattcaagac agaagttatc attgctattc tcatttgcatt 1850
tatgatcata tttgggttta ttttttgcac tttgggttta aaacaacgga 1900
gaaaacagat tctatttcct gagaaaatg aagatttcag agagaatata 1950
ttccaatatg atgatgaagg gggtggagaa gaagatacag aggctttga 2000
tatagcagag ctgaggagta gtaccataat gcgggaacgc aagactcgga 2050
aaaccacaag cgctgagatc aggagcctat acaggcagtc tttgcaagtt 2100
ggcccccaca gtgccatatt cagggaaattc attctgaaaa agctcgaaga 2150
agctaatact gatccgtgtg cccctccctt tgattccctc cagacctacg 2200
ctttgaggg aacagggtca ttagctggat ccctgagctc cttagaatca 2250
gcagtctctg atcaggatga aagctatgtat taccttaatg agttgggacc 2300
tcgctttaaa agattagcat gcatgtttgg ttctgcagtg cagtcaaata 2350
attaggcattt tttaccatca aaatttttaa aagtgcataat gtgtattcga 2400
acccaatggt agtcttaaag agtttgcgc cctggctcta tggcggggaa 2450
agccctagtc tatggagttt tctgatttcc ctggagtaaa tactccatgg 2500
ttatTTTaaag ctacctacat gctgtcattt aacagagatg tggggagaaa 2550
tgtaaacaat cagctcacag gcatcaatac aaccagattt gaagtaaaat 2600

aatgttagaa gatattaaaa gtagatgaga ggacacaaga tgtagtcgat 2650
ccttatgcga ttatatcatt atttacttag gaaaagagtaa aaataccaaa 2700
cgagaaaatt taaaggagca aaaatttgca agtcaaatag aaatgtacaa 2750
atcgagataa catttacatt tctatcatat tgacatgaaa attgaaaatg 2800
tatagtcaga gaaattttca tgaattattc catgaagtat tgttccttt 2850
attnaaa 2857

<210> 121
<211> 772
<212> PRT
<213> Homo Sapien

<400> 121
Met Asn Cys Tyr Leu Leu Leu Arg Phe Met Leu Gly Ile Pro Leu
1 5 10 15
Leu Trp Pro Cys Leu Gly Ala Thr Glu Asn Ser Gln Thr Lys Lys
20 25 30
Val Lys Gln Pro Val Arg Ser His Leu Arg Val Lys Arg Gly Trp
35 40 45
Val Trp Asn Gln Phe Phe Val Pro Glu Glu Met Asn Thr Thr Ser
50 55 60
His His Ile Gly Gln Leu Arg Ser Asp Leu Asp Asn Gly Asn Asn
65 70 75
Ser Phe Gln Tyr Lys Leu Leu Gly Ala Gly Ala Gly Ser Thr Phe
80 85 90
Ile Ile Asp Glu Arg Thr Gly Asp Ile Tyr Ala Ile Gln Lys Leu
95 100 105
Asp Arg Glu Glu Arg Ser Leu Tyr Ile Leu Arg Ala Gln Val Ile
110 115 120
Asp Ile Ala Thr Gly Arg Ala Val Glu Pro Glu Ser Glu Phe Val
125 130 135
Ile Lys Val Ser Asp Ile Asn Asp Asn Glu Pro Lys Phe Leu Asp
140 145 150
Glu Pro Tyr Glu Ala Ile Val Pro Glu Met Ser Pro Glu Gly Thr
155 160 165
Leu Val Ile Gln Val Thr Ala Ser Asp Ala Asp Asp Pro Ser Ser
170 175 180
Gly Asn Asn Ala Arg Leu Leu Tyr Ser Leu Leu Gln Gly Gln Pro
185 190 195
Tyr Phe Ser Val Glu Pro Thr Thr Gly Val Ile Arg Ile Ser Ser

200	205	210
Lys Met Asp Arg Glu Leu Gln Asp Glu Tyr Trp Val Ile Ile Gln		
215	220	225
Ala Lys Asp Met Ile Gly Gln Pro Gly Ala Leu Ser Gly Thr Thr		
230	235	240
Ser Val Leu Ile Lys Leu Ser Asp Val Asn Asp Asn Lys Pro Ile		
245	250	255
Phe Lys Glu Ser Leu Tyr Arg Leu Thr Val Ser Glu Ser Ala Pro		
260	265	270
Thr Gly Thr Ser Ile Gly Thr Ile Met Ala Tyr Asp Asn Asp Ile		
275	280	285
Gly Glu Asn Ala Glu Met Asp Tyr Ser Ile Glu Glu Asp Asp Ser		
290	295	300
Gln Thr Phe Asp Ile Ile Thr Asn His Glu Thr Gln Glu Gly Ile		
305	310	315
Val Ile Leu Lys Lys Val Asp Phe Glu His Gln Asn His Tyr		
320	325	330
Gly Ile Arg Ala Lys Val Lys Asn His His Val Pro Glu Gln Leu		
335	340	345
Met Lys Tyr His Thr Glu Ala Ser Thr Thr Phe Ile Lys Ile Gln		
350	355	360
Val Glu Asp Val Asp Glu Pro Pro Leu Phe Leu Leu Pro Tyr Tyr		
365	370	375
Val Phe Glu Val Phe Glu Glu Thr Pro Gln Gly Ser Phe Val Gly		
380	385	390
Val Val Ser Ala Thr Asp Pro Asp Asn Arg Lys Ser Pro Ile Arg		
395	400	405
Tyr Ser Ile Thr Arg Ser Lys Val Phe Asn Ile Asn Asp Asn Gly		
410	415	420
Thr Ile Thr Thr Ser Asn Ser Leu Asp Arg Glu Ile Ser Ala Trp		
425	430	435
Tyr Asn Leu Ser Ile Thr Ala Thr Glu Lys Tyr Asn Ile Glu Gln		
440	445	450
Ile Ser Ser Ile Pro Leu Tyr Val Gln Val Leu Asn Ile Asn Asp		
455	460	465
His Ala Pro Glu Phe Ser Gln Tyr Tyr Glu Thr Tyr Val Cys Glu		
470	475	480
Asn Ala Gly Ser Gly Gln Val Ile Gln Thr Ile Ser Ala Val Asp		
485	490	495

Arg Asp Glu Ser Ile Glu Glu His His Phe Tyr Phe Asn Leu Ser
 500 505 510
 Val Glu Asp Thr Asn Asn Ser Ser Phe Thr Ile Ile Asp Asn Gln
 515 520 525
 Asp Asn Thr Ala Val Ile Leu Thr Asn Arg Thr Gly Phe Asn Leu
 530 535 540
 Gln Glu Glu Pro Val Phe Tyr Ile Ser Ile Leu Ile Ala Asp Asn
 545 550 555
 Gly Ile Pro Ser Leu Thr Ser Thr Asn Thr Leu Thr Ile His Val
 560 565 570
 Cys Asp Cys Gly Asp Ser Gly Ser Thr Gln Thr Cys Gln Tyr Gln
 575 580 585
 Glu Leu Val Leu Ser Met Gly Phe Lys Thr Glu Val Ile Ile Ala
 590 595 600
 Ile Leu Ile Cys Ile Met Ile Ile Phe Gly Phe Ile Phe Leu Thr
 605 610 615
 Leu Gly Leu Lys Gln Arg Arg Lys Gln Ile Leu Phe Pro Glu Lys
 620 625 630
 Ser Glu Asp Phe Arg Glu Asn Ile Phe Gln Tyr Asp Asp Glu Gly
 635 640 645
 Gly Gly Glu Glu Asp Thr Glu Ala Phe Asp Ile Ala Glu Leu Arg
 650 655 660
 Ser Ser Thr Ile Met Arg Glu Arg Lys Thr Arg Lys Thr Thr Ser
 665 670 675
 Ala Glu Ile Arg Ser Leu Tyr Arg Gln Ser Leu Gln Val Gly Pro
 680 685 690
 Asp Ser Ala Ile Phe Arg Lys Phe Ile Leu Glu Lys Leu Glu Glu
 695 700 705
 Ala Asn Thr Asp Pro Cys Ala Pro Pro Phe Asp Ser Leu Gln Thr
 710 715 720
 Tyr Ala Phe Glu Gly Thr Gly Ser Leu Ala Gly Ser Leu Ser Ser
 725 730 735
 Leu Glu Ser Ala Val Ser Asp Gln Asp Glu Ser Tyr Asp Tyr Leu
 740 745 750
 Asn Glu Leu Gly Pro Arg Phe Lys Arg Leu Ala Cys Met Phe Gly
 755 760 765
 Ser Ala Val Gln Ser Asn Asn
 770

<210> 122

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 122
cttgactgtc tctgaatctg caccc 25

<210> 123
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 123
aagtgggtgga agcctccagt gtgg 24

<210> 124
<211> 52
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 124
ccactacggt attagagcaa aagttaaaaa ccatcatggt tcctggagca 50
gc 52

<210> 125
<211> 1152
<212> DNA
<213> Homo Sapien

<400> 125
tttcagaaca ggttctcatt ccccaagtcac cagttgctcg agttagaatt 50
gtctgcaatg gcccgcctgc agaaaatctgt gagctcttc cttatgggaa 100
ccctggccac cagctgcctc cttctttgg cccttttgtt acagggagga 150
gcagctgcgc ccatcagctc ccactgcagg cttgacaagt ccaacttcca 200
gcagccctat atcaccaacc gcaccttcat gctggctaag gaggctagct 250
tggctgataa caacacagac gttcgtctca ttggggagaa actgttccac 300
ggagtcagta tgagtgagcg ctgctatctg atgaagcagg tgctgaactt 350
cacccctgaa gaagtgcgtgt tccctcaatc tgataggttc cagccttata 400
tgcaggaggt ggtgcccttc ctggccaggg tcagcaacag gctaagcaca 450

tgtcatattg aaggtgatga cctgcatac cagaggaatg tgcaaaagct 500
gaaggacaca gtaaaaaagc ttggagagag tggagagatc aaagcaattg 550
gagaactgga tttgctgtt atgtctctga gaaatgcctg catttgacca 600
gagcaaagct gaaaaatgaa taactaaccc cctttccctg ctagaaataa 650
caatttagatg ccccaaagcg atttttta accaaaagga agatgggaag 700
ccaaactcca tcatgatggg tggattccaa atgaaccct gcgttagtta 750
caaaggaaac caatgccact tttgtttata agaccagaag gtagactttc 800
taagcataga tatttattga taacatttca ttgtaactgg tggctatac 850
acagaaaaca atttatttt taaataattg tcttttcca taaaaaaagat 900
tactttccat tccttaggg gaaaaaaccc ctaaatagct tcatgtttcc 950
ataatcagta ctatcatattt ataaatgtat ttattattat tataagactg 1000
cattttattt atatcatttt attaatatgg atttatttat agaaacatca 1050
ttcgatattg ctacttgagt gtaaggctaa tattgatatt tatgacaata 1100
attatagagc tataacatgt ttatggacc tcaataaaca cttggatatac 1150
cc 1152

<210> 126
<211> 179
<212> PRT
<213> Homo Sapien

<400> 126
Met Ala Ala Leu Gln Lys Ser Val Ser Ser Phe Leu Met Gly Thr
1 5 10 15
Leu Ala Thr Ser Cys Leu Leu Leu Ala Leu Leu Val Gln Gly
20 25 30
Gly Ala Ala Ala Pro Ile Ser Ser His Cys Arg Leu Asp Lys Ser
35 40 45
Asn Phe Gln Gln Pro Tyr Ile Thr Asn Arg Thr Phe Met Leu Ala
50 55 60
Lys Glu Ala Ser Leu Ala Asp Asn Asn Thr Asp Val Arg Leu Ile
65 70 75
Gly Glu Lys Leu Phe His Gly Val Ser Met Ser Glu Arg Cys Tyr
80 85 90
Leu Met Lys Gln Val Leu Asn Phe Thr Leu Glu Glu Val Leu Phe
95 100 105
Pro Gln Ser Asp Arg Phe Gln Pro Tyr Met Gln Glu Val Val Pro

110	115	120
Phe Leu Ala Arg Leu Ser Asn Arg Leu Ser Thr Cys His Ile Glu		
125	130	135
Gly Asp Asp Leu His Ile Gln Arg Asn Val Gln Lys Leu Lys Asp		
140	145	150
Thr Val Lys Lys Leu Gly Glu Ser Gly Glu Ile Lys Ala Ile Gly		
155	160	165
Glu Leu Asp Leu Leu Phe Met Ser Leu Arg Asn Ala Cys Ile		
170	175	

<210> 127
<211> 2557
<212> DNA
<213> Homo Sapien

<400> 127
gccctaacct tcccaggct cagcttttgc gagctgcccc ttccctccggc 50
tgcgagaaag gacgcgcgcc ctgcgtcggg cgaagaaaag aagcaaaaact 100
tgtcgggagg gtttcgtcat caacccctt cccgcaaaacc taaacccctt 150
gccggggcca tcccttagaca gaggaaagtt cctgcagagc cgaccagccc 200
tagtggatct ggggcaggca gcggcgctgg ctgtggatt agatctgttt 250
tgaacccagt ggagcgcatac gctggggctc ggaagtccacc gtccgcggc 300
accgggttgg cgctgcccga gtggaaaccga cagttgcga gcctcggctg 350
caagtggcct ctccctcccg cggttgggtgt tcagtgtcgg gtgagggttg 400
cgagtgtggc aagttgcaaa gagagcctca gaggtccgaa gagcgctgcg 450
ctcctactcg cgttcgcttc ttccctttct cgggtcccta ctgtgaaatc 500
gcagcgcacat ttacaaaggc ctccgggtcc taccgagacc gatccgcagc 550
gtttggcccg gtctgtgccta ttgcattcggtt agcccccgag caccggcgaa 600
atggcgaggt tcccgaaggc cgacactggcc gctgcaggag ttatgttact 650
ttgccacttc ttcacggacc agtttcagtt cgccgatggg aaacccggag 700
accaaatcct tgattggcag tatggagttt ctcaggcctt ccctcacaca 750
gaggaggagg tggaagttga ttcacacgcg tacagccaca ggtggaaaag 800
aaacttggac tttctcaagg cggttagacac gaaccgagca agcgtcggcc 850
aagactctcc tgagcccaga agtttcacag acctgctgct ggtatgtggg 900
caggacaata acactcagat cgaggaggat acagaccaca attactata 950

atctcgaata tatggtccat ctgattctgc cagccggat ttatgggtga 1000
acatagacca aatggaaaaa gataaaagtga agattcatgg aatattgtcc 1050
aataactcatc ggcaagctgc aagagtgaat ctgtccttcg atttccatt 1100
ttatggccac ttcctacgtg aaatcactgt ggcaaccggg ggtttcatat 1150
acactggaga agtcgtacat cgaatgctaa cagccacaca gtacatagca 1200
ccttaatgg caaatttcga tcccagtgtt tccagaaatt caactgtcag 1250
atattttgat aatggcacag cacttgtggt ccagtggac catgtacatc 1300
tccaggataa ttataacctg ggaagcttca cattccaggc aaccctgctc 1350
atggatggac gaatcatctt tggatacaaa gaaattcctg tcttggtcac 1400
acagataagt tcaaccaatc atccagtgaa agtcggactg tccgatgcat 1450
ttgtcggtgt ccacaggatc caacaaattc ccaatgttcg aagaagaaca 1500
atttatgaat accaccgagt agagctacaa atgtcaaaaa ttaccaacat 1550
ttcggctgtg gagatgaccc cattacccac atgcctccag tttAACAGAT 1600
gtggccccctg tgtatcttct cagattggct tcaactgcag ttgggttagt 1650
aaacttcaaa gatgttccag tggatttgat cgtcatcgcc aggactgggt 1700
ggacagtgga tgccctgaag agtcaaaaaga gaagatgtgt gagaatacag 1750
aaccagtgga aacttcttct cgaaccacca caaccgtagg agcgacaacc 1800
accaggatca gggtcctaacc taccaccaga agagcagtga cttctcagtt 1850
tcccaccagc ctccctacag aagatgatac caagatagca ctacatctaa 1900
aagataatgg agcttctaca gatgacagtg cagctgagaa gaaaggggga 1950
accctccacg ctggcctcat cattggaaatc ctcatcctgg tcctcattgt 2000
agccacagcc attcttgcgtc cagtcataat gtatcaccac ccaacatcag 2050
cagccagcat cttctttatt gagagacgcc caagcagatg gcctgcgtat 2100
aagtttagaa gaggctctgg acatcctgcc tatgctgaag ttgaaccagt 2150
tggagagaaa gaaggcttta ttgtatcaga gcagtgcata aatttctagg 2200
acagaacaac accagtactg gtttacaggt gttaagacta aaattttgcc 2250
tataccttta agacaaacaa acaaacacac acacaaacaa gctctaagct 2300
gctgtacccctt gaagaagaca agatttctgg acaagctcag cccaggaaac 2350
aaagggtaaa caaaaaacta aaacttatac aagataccat ttacactgaa 2400

catagaattc cctagtggaa tgtcatctat agttcactcg gaacatctcc 2450
cgtggactta tctgaagttat gacaagatta taatgctttt ggcttagtg 2500
cagggttgca aagggatcag aaaaaaaaaa tcataataaa gcttttagttc 2550
atgaggg 2557

<210> 128
<211> 529
<212> PRT
<213> Homo Sapien

<400> 128
Met Ala Arg Phe Pro Lys Ala Asp Leu Ala Ala Ala Gly Val Met
1 5 10 15
Leu Leu Cys His Phe Phe Thr Asp Gln Phe Gln Phe Ala Asp Gly
20 25 30
Lys Pro Gly Asp Gln Ile Leu Asp Trp Gln Tyr Gly Val Thr Gln
35 40 45
Ala Phe Pro His Thr Glu Glu Glu Val Glu Val Asp Ser His Ala
50 55 60
Tyr Ser His Arg Trp Lys Arg Asn Leu Asp Phe Leu Lys Ala Val
65 70 75
Asp Thr Asn Arg Ala Ser Val Gly Gln Asp Ser Pro Glu Pro Arg
80 85 90
Ser Phe Thr Asp Leu Leu Leu Asp Asp Gly Gln Asp Asn Asn Thr
95 100 105
Gln Ile Glu Glu Asp Thr Asp His Asn Tyr Tyr Ile Ser Arg Ile
110 115 120
Tyr Gly Pro Ser Asp Ser Ala Ser Arg Asp Leu Trp Val Asn Ile
125 130 135
Asp Gln Met Glu Lys Asp Lys Val Lys Ile His Gly Ile Leu Ser
140 145 150
Asn Thr His Arg Gln Ala Ala Arg Val Asn Leu Ser Phe Asp Phe
155 160 165
Pro Phe Tyr Gly His Phe Leu Arg Glu Ile Thr Val Ala Thr Gly
170 175 180
Gly Phe Ile Tyr Thr Gly Glu Val Val His Arg Met Leu Thr Ala
185 190 195
Thr Gln Tyr Ile Ala Pro Leu Met Ala Asn Phe Asp Pro Ser Val
200 205 210
Ser Arg Asn Ser Thr Val Arg Tyr Phe Asp Asn Gly Thr Ala Leu
215 220 225

Val Val Gln Trp Asp His Val His Leu Gln Asp Asn Tyr Asn Leu
 230 235 240
 Gly Ser Phe Thr Phe Gln Ala Thr Leu Leu Met Asp Gly Arg Ile
 245 250 255
 Ile Phe Gly Tyr Lys Glu Ile Pro Val Leu Val Thr Gln Ile Ser
 260 265 270
 Ser Thr Asn His Pro Val Lys Val Gly Leu Ser Asp Ala Phe Val
 275 280 285
 Val Val His Arg Ile Gln Gln Ile Pro Asn Val Arg Arg Arg Thr
 290 295 300
 Ile Tyr Glu Tyr His Arg Val Glu Leu Gln Met Ser Lys Ile Thr
 305 310 315
 Asn Ile Ser Ala Val Glu Met Thr Pro Leu Pro Thr Cys Leu Gln
 320 325 330
 Phe Asn Arg Cys Gly Pro Cys Val Ser Ser Gln Ile Gly Phe Asn
 335 340 345
 Cys Ser Trp Cys Ser Lys Leu Gln Arg Cys Ser Ser Gly Phe Asp
 350 355 360
 Arg His Arg Gln Asp Trp Val Asp Ser Gly Cys Pro Glu Glu Ser
 365 370 375
 Lys Glu Lys Met Cys Glu Asn Thr Glu Pro Val Glu Thr Ser Ser
 380 385 390
 Arg Thr Thr Thr Thr Val Gly Ala Thr Thr Thr Gln Phe Arg Val
 395 400 405
 Leu Thr Thr Thr Arg Arg Ala Val Thr Ser Gln Phe Pro Thr Ser
 410 415 420
 Leu Pro Thr Glu Asp Asp Thr Lys Ile Ala Leu His Leu Lys Asp
 425 430 435
 Asn Gly Ala Ser Thr Asp Asp Ser Ala Ala Glu Lys Lys Gly Gly
 440 445 450
 Thr Leu His Ala Gly Leu Ile Ile Gly Ile Leu Ile Leu Val Leu
 455 460 465
 Ile Val Ala Thr Ala Ile Leu Val Thr Val Tyr Met Tyr His His
 470 475 480
 Pro Thr Ser Ala Ala Ser Ile Phe Phe Ile Glu Arg Arg Pro Ser
 485 490 495
 Arg Trp Pro Ala Met Lys Phe Arg Arg Gly Ser Gly His Pro Ala
 500 505 510
 Tyr Ala Glu Val Glu Pro Val Gly Glu Lys Glu Gly Phe Ile Val

515

520

525

Ser Glu Gln Cys

<210> 129
<211> 4834
<212> DNA
<213> Homo Sapien

<220>
<221> unsure
<222> 3784
<223> unknown base

<400> 129
gcagccctag cagggatgga catgatgctg ttggtgcaagg gtgtttttt 50
ctcgaaaccag tggctggcgg cggtgctct cagcctgtgc tgccctgtac 100
cctcctgcct cccggctgga cagagtgtgg acttcccctg ggccggccgtg 150
gacaacatga tggtcagaaa aggggacacg gcggtgctta ggtgttattt 200
ggaagatgga gcttcaaagg gtgcctggct gaaccggtca agtattattt 250
ttgcgggagg tgataagtgg tcagtggtc ctcgagtttca 300
ttgaataaaa gggactacag cctccagata cagaatgttag atgtgacaga 350
tgatggccca tacacgtgtt ctgttcagac tcaacataca cccagaacaa 400
tgcaggtgca tctaactgtg caagttctc ctaagatata tgacatctca 450
aatgatatga ccgtcaatga aggaaccaac gtcactctta cttgtttggc 500
caactggaaa ccagagcctt ccatttcttg gcgacacatc tccccatcag 550
caaaaccatt tgaaaatgga caatatttgg acatttatgg aattacaagg 600
gaccaggctg ggaaatatga atgcagtgcg gaaaatgatg tgtcattccc 650
agatgtgagg aaagtaaaag ttgttgtcaa ctttgctcct actattcagg 700
aaattaaatc tggcacccgtg accccccggac gcagtggcct gataagatgt 750
gaaggtgcag gtgtgcgcgc tccagccttt gaatggtaca aaggagagaa 800
gaagctcttc aatggccaac aaggaattat tattcaaaat ttttagcacaa 850
gatccattct cactgttacc aacgtgacac aggagcactt cgcaattat 900
acttgtgtgg ctgccaacaa gctaggcaca accaatgcga gcctgcctct 950
taaccctcca agtacagccc agtatggaat taccgggagc gctgatgttc 1000
tttctcttg ctggcacctt gtgttgacac tgtcctcttt caccagcata 1050

ttctacctga agaatgccat tctacaataa attcaaagac ccataaaagg 1100
ctttaagga ttctctgaaa gtgctgatgg ctggatccaa tctggtagc 1150
tttgttaaaa gcagcgtggg atataatcag cagtgcattac atggggatga 1200
tcgccttctg tagaattgct cattatgtaa atacttaat tctactctt 1250
tttgattagc tacattacct tgtgaagcag tacacattgt cctttttta 1300
agacgtgaaa gctctgaaat tactttaga ggatattaat tgtgattca 1350
tgtttgaat ctacaacttt tcaaaagcat tcagtcattgg tctgcttaggt 1400
tgcaggctgt agtttacaaa aacgaatatt gcagtgaata tgtgattctt 1450
taaggctgca atacaagcat tcagttccct gtttcaataa gagtcaatcc 1500
acatttacaa agatgcattt tttcttttt tgataaaaaaa gcaaataata 1550
ttgccttcag attatttctt caaaatataa cacatatcta gattttctg 1600
ctcgcattgt attcaggttt caggaatgag cttgtataa taactggctg 1650
tgcagctctg cttcttttc ctgttaagttc agcatgggtg tgccttcata 1700
caataatatt tttctcttg tctccaacta atataaaatg ttttgctaaa 1750
tcttacaatt tgaaagtaaa aataaaccag agtgatcaag ttaaaccata 1800
caactatctt aagtaacgaa ggagctattg gactgtaaaa atctcttct 1850
gcactgacaa tggggtttga gaattttgcc ccacactaac tcagttctt 1900
tgatgagaga caatttaata acagtatagt aaatatacca tatgatttct 1950
ttagttgttag ctaaatgtta gatccaccgt gggaaatcat tccctttaaa 2000
atgacagcac agtccactca aaggattgcc tagcaataca gcatctttc 2050
ctttcactag tccaagccaa aaattttaaatg atgatttgc agaaaggca 2100
caaagtccata tcacctaata ttacaagagt tggtaagcgc tcattttaa 2150
ttttattttg tggcagctaa gtttagtatga cagaggcagt gctcctgtgg 2200
acaggagcat tttgcattttt ttccatctga aagtatcact cagttgatag 2250
tctggatgc atgttatata tttaaaact tccaaaatatttataacaa 2300
acattctata tcggtatgtta gcagaccaat ctctaaaata gctaattctt 2350
caataaaatc tttctatata gccatttcag tgcaaacaag taaaatcaaa 2400
aaagaccatc ctttattttt ctttacatga tataatgtaa atgcgatcaa 2450
ataaagacaa aacaccagtg atgagaatat cttaagataa gtaattatca 2500

aatttattgtg aatgttaaat tatttctact ataaagaagc aaaactacat 2550
tttgaagga aaatgctgtt actctaacat taatttacag gaatagttg 2600
atggttcac tccttactaa agaaaggcca tcacctgaa agccatttt 2650
caggttgat gaagttacca atttcagttac acctaaattt ctacaaatag 2700
tccccttta caagttgtaa caacaaagac cctataataa aatttagatac 2750
aagaaatttt gcagtggta tacatatttgc agatatctag tatgttgccc 2800
tagcagggat ggctaaaaaa ctgtgatttt ttttcttcaa gtaaaactta 2850
gtccccaaagt acatcataaa tcaattttaa tttagaaaaat gaatcttaaa 2900
tgaggggaca taagtatact ctttccacaa aatggcaata ataaggcata 2950
aagctagtaa atctactaac tgtaataat gtatgacatt attttgatttgc 3000
atacatataaa aaagagttt tagaacaaat atggcatttta actttatttt 3050
ttatttgctt ttaagaaata ttctttgtgg aattgttggaa taaactataa 3100
aatatttattt tgatttgcag cttttaagtgc gcacactcca taataatcta 3150
cttactagaa atagtggtgc taccacaaaa aatgttaacc atcagttacca 3200
ttgtttggga gaaagaaaaca gatcaagaat gcatattttt cagtgaccgc 3250
tttccttagag ttaaaaatacc tcctcttgc aaggtttgc ggtaaaatttgc 3300
ggtataaaact atggatgaac caaataatta gttcaaaatgt ttgtcatgtat 3350
tccaaatttg tggagtctgg tggttttacc atagaatgtg acagaagtac 3400
agtcatagct cagtagctat atgtatttgc ctttatgtta gaagagactt 3450
tcttgagtga catttttaaa tagaggaggt attcactatg ttttcttgc 3500
tcacagcagc attccttagtc cttaggcctt cgacagagt gaaatcatga 3550
gtatatttgc gttcaatattt gtcacataag gtcacatgtat ttgtttttttt 3600
gtgtgaatgt attgcataata atgttcaagt agatgattttt acattttatgg 3650
acatataaaa tgtctgatta ccccattttca tcagtcctga ctgtacaaga 3700
ttgttgcaat ttcagaatag cagtttata aattgattttt tcttttaatc 3750
tataacaattt tgcgttagct gttcatttca ggantatattt ttctacaatgt 3800
tccacttgcggactcctt tgggtttttt aaagaaggaa 3850
gaaagaaaaaa taagtagcag tttaaaaatg agaatggaga gaaaagaaaa 3900
agaatqaaaaaa qgaaaggcag taaagaggaa aaaaaaagga aggttggaaag 3950

gaatgaagga aggaagggag gaaggggaga aggttaggaag aaagaaaagga 4000
tgagagggaa ggaagaatca gagtattagg gtagttaact tacacatttgc 4050
cattcttagt ttaactgcaa gtgggtgtaac tatgttttc aatgatcgca 4100
tttgaacat aagtccattt ataccattaa gttccttatta tgccagcaatt 4150
atataataaa aagtactgcc caagttatag taatgtgggt gttttgaga 4200
cactaaaaaga tttgagaggg agaatttcaa acttaaagcc acttttgggg 4250
ggtttataac ttaactgaaa aattaatgct tcatacataac atttaagcta 4300
tatctagaaa gtagactgga gaactgagaa aattacccag gtaattcagg 4350
gaaaaaaaaaa aatatataata tatataaaata cccctacatt tgaagtcaga 4400
aaactctgaa aaactgaatt atcaaagtca atcatctata atgatcaaatt 4450
ttactgaaca attgttaatt tatccattgt gcttagctt gtgacacagc 4500
caaaaagttac ctatccaatc ttttcaataa aaattgtttt ttgaaatcca 4550
gaaatgattt aaaaagaggt caggtttta actatttatt gaagtatgtg 4600
gatgtacagt atttcaatag atatgaatat gaataaatgg tatgccttaa 4650
gattcttga atatgtattt actttaaaga ctggaaaaag ctcttcctgt 4700
cttttagtaa aacatccata tttcataacc tgatgtaaaa tatgttgtac 4750
tgtttccaat aggtgaatat aaactcagtt tatcaattaa aaaaaaaaaaa 4800
aaaaaaaaaa aaaaaaaaaaa aaaaaaaaaaa aaaa 4834

<210> 130
<211> 354
<212> PRT
<213> Homo Sapien

```

<400> 130
Met Asp Met Met Leu Leu Val Gln Gly Ala Cys Cys Ser Asn Gln
      1           5           10          15

Trp Leu Ala Ala Val Leu Leu Ser Leu Cys Cys Leu Leu Pro Ser
      20          25          30

Cys Leu Pro Ala Gly Gln Ser Val Asp Phe Pro Trp Ala Ala Val
      35          40          45

Asp Asn Met Met Val Arg Lys Gly Asp Thr Ala Val Leu Arg Cys
      50          55          60

Tyr Leu Glu Asp Gly Ala Ser Lys Gly Ala Trp Leu Asn Arg Ser
      65          70          75

Ser Ile Ile Phe Ala Gly Gly Asp Lys Trp Ser Val Asp Pro Arg

```

80	85	90
Val Ser Ile Ser Thr Leu Asn Lys Arg Asp Tyr Ser Leu Gln Ile		
95	100	105
Gln Asn Val Asp Val Thr Asp Asp Gly Pro Tyr Thr Cys Ser Val		
110	115	120
Gln Thr Gln His Thr Pro Arg Thr Met Gln Val His Leu Thr Val		
125	130	135
Gln Val Pro Pro Lys Ile Tyr Asp Ile Ser Asn Asp Met Thr Val		
140	145	150
Asn Glu Gly Thr Asn Val Thr Leu Thr Cys Leu Ala Thr Gly Lys		
155	160	165
Pro Glu Pro Ser Ile Ser Trp Arg His Ile Ser Pro Ser Ala Lys		
170	175	180
Pro Phe Glu Asn Gly Gln Tyr Leu Asp Ile Tyr Gly Ile Thr Arg		
185	190	195
Asp Gln Ala Gly Glu Tyr Glu Cys Ser Ala Glu Asn Asp Val Ser		
200	205	210
Phe Pro Asp Val Arg Lys Val Lys Val Val Asn Phe Ala Pro		
215	220	225
Thr Ile Gln Glu Ile Lys Ser Gly Thr Val Thr Pro Gly Arg Ser		
230	235	240
Gly Leu Ile Arg Cys Glu Gly Ala Gly Val Pro Pro Pro Ala Phe		
245	250	255
Glu Trp Tyr Lys Gly Glu Lys Lys Leu Phe Asn Gly Gln Gln Gly		
260	265	270
Ile Ile Ile Gln Asn Phe Ser Thr Arg Ser Ile Leu Thr Val Thr		
275	280	285
Asn Val Thr Gln Glu His Phe Gly Asn Tyr Thr Cys Val Ala Ala		
290	295	300
Asn Lys Leu Gly Thr Thr Asn Ala Ser Leu Pro Leu Asn Pro Pro		
305	310	315
Ser Thr Ala Gln Tyr Gly Ile Thr Gly Ser Ala Asp Val Leu Phe		
320	325	330
Ser Cys Trp Tyr Leu Val Leu Thr Leu Ser Ser Phe Thr Ser Ile		
335	340	345
Phe Tyr Leu Lys Asn Ala Ile Leu Gln		
350		

<210> 131
<211> 823

<212> DNA

<213> Homo Sapien

<400> 131

atagtagaag aatgtctctg aaattactgg atgagttca gtcatacttt 50
cacatggca caatttcaca ttcaagctcc ttatcctagg ctaattttat 100
attatgttaa atcacttgc tttgttctca cggcttcctg cctgctatag 150
gcataattac gaggaagcag aacttctcca gaagcaagcg cacatgcgtt 200
ccaaaataag agcaaattcg ctctaaacac aggaaaagac ctgaagcttt 250
aattaagggg ttacatccaa ccccagagcg cttttgtggg cactgattgc 300
tccagcttct gcgtcactgc gcgagggaaag aggaaagagg atccaggcgt 350
tagacatgta tagacacaaa aacagctgga gattggcctt aaaataccca 400
ccaagctcca aagaagagac ccaagtcccc aaaacattga tttcaggcgt 450
gccaggaagg aagagcagca gcaggggtggg agagaagctc cagtcagccc 500
acaagatgcc attgtccccc ggccctctgc tgctgctgct ctccggggcc 550
acggccaccg ctgcccgtcc cctggagggt ggccccaccg gccgagacag 600
cgagcatatg caggaagcgg caggaataag gaaaagcagc ctcctgactt 650
tcctcgcttg gtggttttag tggacctccc aggccagtgc cggcccccctc 700
ataggagagg aagctcgaaa ggtggccagg cggcaggaag ggcacccccc 750
ccagcaatcc ggcgcgcggg acagaatgcc ctgcaggaac ttcttctgga 800
agaccttctc ctccctgaaaa tag 823

<210> 132

<211> 155

<212> PRT

<213> Homo Sapien

<400> 132

Met	Tyr	Arg	His	Lys	Asn	Ser	Trp	Arg	Leu	Gly	Leu	Lys	Tyr	Pro
1				5					10				15	
Pro	Ser	Ser	Lys	Glu	Glu	Thr	Gln	Val	Pro	Lys	Thr	Leu	Ile	Ser
			20					25				30		
Gly	Leu	Pro	Gly	Arg	Lys	Ser	Ser	Ser	Arg	Val	Gly	Glu	Lys	Leu
	35							40				45		
Gln	Ser	Ala	His	Lys	Met	Pro	Leu	Ser	Pro	Gly	Leu	Leu	Leu	
				50				55				60		
Leu	Leu	Ser	Gly	Ala	Thr	Ala	Thr	Ala	Ala	Leu	Pro	Leu	Glu	Gly
			65					70				75		

Gly Pro Thr Gly Arg Asp Ser Glu His Met Gln Glu Ala Ala Gly
80 85 90

Ile Arg Lys Ser Ser Leu Leu Thr Phe Leu Ala Trp Trp Phe Glu
95 100 105

Trp Thr Ser Gln Ala Ser Ala Gly Pro Leu Ile Gly Glu Glu Ala
110 115 120

Arg Glu Val Ala Arg Arg Gln Glu Gly Ala Pro Pro Gln Gln Ser
125 130 135

Ala Arg Arg Asp Arg Met Pro Cys Arg Asn Phe Phe Trp Lys Thr
140 145 150

Phe Ser Ser Cys Lys
155

<210> 133

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 133

tcagggctgc caggaaggaa gagc 24

<210> 134

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 134

gcaggaggag aaggtttcc agaagaag 28

<210> 135

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 135

agaagttcca gtcagccac aagatgccat tgtccccgg cctcc 45

<210> 136

<211> 1875

<212> DNA

<213> Homo Sapien

<400> 136

gtcggtgtct tggaggaagc cgcgaaaccc ccagcgtaag tccatggcgt 50

ggagccttgg gagctggctg ggtggctgcc tgctgggtgc agcattggga 100
atggtaccac ctcccggaaaa tgtcagaatg aattctgtta atttcaagaa 150
cattctacag tgggagtcac ctgctttgc caaaggaaac ctgactttca 200
cagctcagta cctaagttat aggatattcc aagataaatg catgaatact 250
accttgacgg aatgtgattt ctcaagtctt tccaagttatg gtgaccacac 300
cttgagagtc agggctgaat ttgcagatga gcattcagac tggtaaaca 350
tcaccttctg tcctgtggat gacaccatta ttggaccccc tggaatgcaa 400
gtagaagtac ttgctgattc tttacatatg cgtttcttag cccctaaaat 450
tgagaatgaa tacgaaactt ggactatgaa gaatgtgtat aactcatgga 500
cttataatgt gcaataactgg aaaaacggta ctgatggaaaa gtttcaaatt 550
actccccagt atgactttga ggtcctcaga aacctggagc catggacaac 600
ttattgtgtt caagttcgag ggtttcttcc tgatcggAAC aaagctgggg 650
aatggagtga gcctgtctgt gagcaaacaa cccatgacga aacggcccc 700
tcctggatgg tggccgtcat cctcatggcc tcggcttca tggctgcct 750
ggcactcctc ggctgcttct ccttgcgtgt gtgcgtttac aagaagacaa 800
agtacgcctt ctcccctagg aattctcttc cacagcacct gaaagagttt 850
ttgggccatc ctcatcataa cacacttctg ttttcttctt ttccattgtc 900
ggatgagaat gatgttttg acaagctaag tgtcattgca gaagactctg 950
agagcggcaa gcagaatctt ggtgacagct gcagcctcgg gaccccgct 1000
gggcaggggc cccaaagcta ggctctgaga aggaaacaca ctcggctggg 1050
cacagtgacg tactccatct cacatctgcc tcagtgaggg atcagggcag 1100
caaacaaggg ccaagaccat ctgagccago cccacatcta gaactccaga 1150
cctggactta gccaccagag agctacattt taaaggctgt ctggcaaaa 1200
atactccatt tgggaactca ctgccttata aaggcttca tgatgtttc 1250
agaagttggc cactgagagt gtaatttca gcctttata tcactaaaat 1300
aagatcatgt tttaattgtg agaaacaggg ccgagcacag tggctcacgc 1350
ctgtaataacc agcaccttag aggtcgaggc aggcggatca cttgaggtca 1400
ggagttcaag accagcctgg ccaatatggt gaaacccagt ctctactaaa 1450
aatacaaaaa ttagcttaggc atgatggcgc atgcctataa tcccagctac 1500

tcgagtgcct gaggcaggag aattgcatga acccgggagg aggaggagga 1550
ggttgcagtg agccgagata gcggcaactgc actccagcct gggtgacaaa 1600
gtgagactcc atctcaaaaa aaaaaaaaaaa aaattgtgag aaacagaaat 1650
acttaaaatg aggaataaga atggagatgt tacatctggt agatgtaaca 1700
ttctaccaga ttatggatgg actgatctga aaatcgacct caactcaagg 1750
gtggtcagct caatgctaca cagagcacgg acttttggat tctttgcagt 1800
actttgaatt tattttcta cctatatatg ttttatatgc tgctggtgct 1850
ccattaaagt tttactctgt gttgc 1875

<210> 137

<211> 325

<212> PRT

<213> Homo Sapien

<400> 137

Met	Ala	Trp	Ser	Leu	Gly	Ser	Trp	Leu	Gly	Gly	Cys	Leu	Leu	Val
1				5				10					15	
Ser	Ala	Leu	Gly	Met	Val	Pro	Pro	Pro	Glu	Asn	Val	Arg	Met	Asn
				20				25					30	
Ser	Val	Asn	Phe	Lys	Asn	Ile	Leu	Gln	Trp	Glu	Ser	Pro	Ala	Phe
				35				40					45	
Ala	Lys	Gly	Asn	Leu	Thr	Phe	Thr	Ala	Gln	Tyr	Leu	Ser	Tyr	Arg
				50				55					60	
Ile	Phe	Gln	Asp	Lys	Cys	Met	Asn	Thr	Thr	Leu	Thr	Glu	Cys	Asp
				65				70					75	
Phe	Ser	Ser	Leu	Ser	Lys	Tyr	Gly	Asp	His	Thr	Leu	Arg	Val	Arg
					80			85					90	
Ala	Glu	Phe	Ala	Asp	Glu	His	Ser	Asp	Trp	Val	Asn	Ile	Thr	Phe
				95				100					105	
Cys	Pro	Val	Asp	Asp	Thr	Ile	Ile	Gly	Pro	Pro	Gly	Met	Gln	Val
				110				115					120	
Glu	Val	Leu	Ala	Asp	Ser	Leu	His	Met	Arg	Phe	Leu	Ala	Pro	Lys
				125				130					135	
Ile	Glu	Asn	Glu	Tyr	Glu	Thr	Trp	Thr	Met	Lys	Asn	Val	Tyr	Asn
				140				145					150	
Ser	Trp	Thr	Tyr	Asn	Val	Gln	Tyr	Trp	Lys	Asn	Gly	Thr	Asp	Glu
				155				160					165	
Lys	Phe	Gln	Ile	Thr	Pro	Gln	Tyr	Asp	Phe	Glu	Val	Leu	Arg	Asn
				170				175					180	

Leu Glu Pro Trp Thr Thr Tyr Cys Val Gln Val Arg Gly Phe Leu
 185 190 195
 Pro Asp Arg Asn Lys Ala Gly Glu Trp Ser Glu Pro Val Cys Glu
 200 205 210
 Gln Thr Thr His Asp Glu Thr Val Pro Ser Trp Met Val Ala Val
 215 220 225
 Ile Leu Met Ala Ser Val Phe Met Val Cys Leu Ala Leu Leu Gly
 230 235 240
 Cys Phe Ser Leu Leu Trp Cys Val Tyr Lys Lys Thr Lys Tyr Ala
 245 250 255
 Phe Ser Pro Arg Asn Ser Leu Pro Gln His Leu Lys Glu Phe Leu
 260 265 270
 Gly His Pro His His Asn Thr Leu Leu Phe Phe Ser Phe Pro Leu
 275 280 285
 Ser Asp Glu Asn Asp Val Phe Asp Lys Leu Ser Val Ile Ala Glu
 290 295 300
 Asp Ser Glu Ser Gly Lys Gln Asn Pro Gly Asp Ser Cys Ser Leu
 305 310 315
 Gly Thr Pro Pro Gly Gln Gly Pro Gln Ser
 320 325

<210> 138
 <211> 2570
 <212> DNA
 <213> Homo Sapien

<400> 138
 cgagcgccaa cccgctagcg cctgaatccg gcgtgctgcc cgctcgccgc 50
 ccgcgcattggc ccgcgcagcc ccgcgtgtcg ccgcgttgac cgcgcttcctc 100
 gcccgcgcgc ctgctggcgg agatgccccg ccggggcaaaa tcgcgggtgg 150
 tggggctggg attgggggt ctgctgtggc ccattttctc cagcagcact 200
 ttggacactcg ggtgcagatc gacgtgtacg agaaggaaac cgtgggtggc 250
 cgcttggcca ccatctcagt caacaaggcag cactatgaga gcggggctgc 300
 ctccttccac tccctgagcc tgcacatgca ggacttcgtc aagctgctgg 350
 ggctgaggca ccggcgccgag gtggtgggca ggagcgccat cttcggcg 400
 gagcacttca tgctggagga gactgactgg tacctgctga acctttccg 450
 cctctggtgg cactatggca tcagcttcct gaggctgcag atgtgggtgg 500
 aggaggtcat ggagaagttc atgaggatct ataagtacca ggcccacggc 550

tatgccttct cgggtgtgga ggagctgctc tactcaactgg gggagtccac 600
ctttgttaac atgaccaggc actctgtggc tgagtccctg ctgcaggtgg 650
gcgtcacgca gcgtttatt gatgatgtcg tttctgtgt cctgcggcc 700
agctatggcc agtcagcagc gatgcccggc tttgcaggag ccatgtca 750
agccggggcc caaggcagcc tgtggctgt ggaaggaggc aataagctgg 800
tttgtccgg tttgctgaag ctcaccaagg ccaatgtat ccatgccaca 850
gtgacctctg tgaccctgca cagcacagag gggaaagccc tgtaccaggt 900
ggcgtatgag aatgaggttag gcaacagctc tgacttctat gacatcgtgg 950
tcatcgccac cccccctgcac ctggacaaca gcagcagcaa cttaaccttt 1000
gcaggcttcc acccgcccat tcatgacgtg cagggcttcc tccagccac 1050
cgtcgctcc ttggccacg gctaccta ctcgtctac ttgggtttcc 1100
cagaccctaa gctttcccc tttgccaaca tccttaccac agatttcccc 1150
agtttcttct gcactctgga caacatctgc cctgtcaaca tctctgccag 1200
cttccggcga aagcagcccc aggaggcagc tggttggcga gtccagttccc 1250
ccaagccccct cttcggacc cagctaaaga ccctgttccg ttcttattac 1300
tcagtgcaga cagctgagtg gcaggccat cccctctatg gctccggccc 1350
cacgctcccg aggtttgcac tccatgacca gctttctac ctcaatgccc 1400
tggagtgggc ggccagotcc gtggaggtga tggccgtggc tgccaagaat 1450
gtggccttgc tggcttacaa ccgctggta caggacctag acaagattga 1500
tcaaaaagat ttgatgcaca aggtcaagac tgaactgtga gggctctagg 1550
gagagcctgg gaactttcat cccccactga agatggatca tcccacagca 1600
gcccaggact gaataagcca tgctcgccca ccaggcttct ttctgacccc 1650
tcatgtatca agcatctcca ggtgacctac tgtctgccta tattaagggt 1700
ccacacggcg gctgctgctt ttttttaagg gggaaagtaa gaaaagagaa 1750
ggaaatccaa gccagtatat ttgttttatt tattttttt aagaagaaaa 1800
aagttcatct tcacaagggtg cttcagactt ggtttcttag ctagaaacca 1850
gaagactacg ggagggata taaggcagag aactatgagt cttttttat 1900
tactgtttt cactacctac tcccacaatg gacaatcaat tgaggcaacc 1950
tacaagaaaa catttacaac cagatggta caaataaagt agaagggaaag 2000

atcagaaaac ctaagaaatg atcatagctc ctggttactg tggacttgat 2050
ggatttgaag tacctagttc agaactccct agtcaccatc tccaaggctg 2100
tcaacatcac tgcatattgg aggagatgac tgtggtagga cccaaggaag 2150
agatgtgtgc ctgaatagtc gtcaccatat ctccaagctt cctggcaacc 2200
agtggaaaaa gaaacatgcg aggctgttagg aagagggaaag ctcttcctt 2250
gcacctagag gaattagcca ttctttcct tatgcaaaga ttgaggaatg 2300
caacaatata aagaagagaa gtccccagat ggttagagac agtcatatct 2350
tacccctaga tgttcatccc agcagaagaa agaagaaggt gttgggttag 2400
gattcttcag aggttagcct ggtactttct catcagacac tagcttgaag 2450
taagaggaga attatgctt tcttgctt ttctacaaac cctaaaaat 2500
cacttggttt aaaaagaaag taaaagccct tttcattcaa aaaaaaaaaa 2550
aaaaaaaaaa aaaaaaaaaa 2570

<210> 139

<211> 494

<212> PRT

<213> Homo Sapien

<400> 139

Met Ala Arg Ala Ala Pro Leu Leu Ala Ala Leu Thr Ala Leu Leu
1 5 10 15

Ala Ala Ala Ala Gly Gly Asp Ala Pro Pro Gly Lys Ile Ala
20 25 30

Val Val Gly Ala Gly Ile Gly Gly Ser Ala Val Ala His Phe Leu
35 40 45

Gln Gln His Phe Gly Pro Arg Val Gln Ile Asp Val Tyr Glu Lys
50 55 60

Gly Thr Val Gly Gly Arg Leu Ala Thr Ile Ser Val Asn Lys Gln
65 70 75

His Tyr Glu Ser Gly Ala Ala Ser Phe His Ser Leu Ser Leu His
80 85 90

Met Gln Asp Phe Val Lys Leu Leu Gly Leu Arg His Arg Arg Glu
95 100 105

Val Val Gly Arg Ser Ala Ile Phe Gly Gly Glu His Phe Met Leu
110 115 120

Glu Glu Thr Asp Trp Tyr Leu Leu Asn Leu Phe Arg Leu Trp Trp
125 130 135

His Tyr Gly Ile Ser Phe Leu Arg Leu Gln Met Trp Val Glu Glu

140	145	150
Val Met Glu Lys Phe Met Arg Ile Tyr	Lys Tyr Gln Ala His	Gly
155	160	165
Tyr Ala Phe Ser Gly Val Glu Glu Leu	Leu Tyr Ser Leu Gly	Glu
170	175	180
Ser Thr Phe Val Asn Met Thr Gln His	Ser Val Ala Glu Ser	Leu
185	190	195
Leu Gln Val Gly Val Thr Gln Arg Phe	Ile Asp Asp Val Val	Ser
200	205	210
Ala Val Leu Arg Ala Ser Tyr Gly Gln	Ser Ala Ala Met Pro	Ala
215	220	225
Phe Ala Gly Ala Met Ser Leu Ala Gly	Ala Gln Gly Ser Leu	Trp
230	235	240
Ser Val Glu Gly Gly Asn Lys Leu Val	Cys Ser Gly Leu Leu	Lys
245	250	255
Leu Thr Lys Ala Asn Val Ile His Ala	Thr Val Thr Ser Val	Thr
260	265	270
Leu His Ser Thr Glu Gly Lys Ala Leu	Tyr Gln Val Ala Tyr	Glu
275	280	285
Asn Glu Val Gly Asn Ser Ser Asp Phe	Tyr Asp Ile Val Val	Ile
290	295	300
Ala Thr Pro Leu His Leu Asp Asn Ser	Ser Ser Asn Leu Thr	Phe
305	310	315
Ala Gly Phe His Pro Pro Ile Asp Asp	Val Gln Gly Ser Phe	Gln
320	325	330
Pro Thr Val Val Ser Leu Val His Gly	Tyr Leu Asn Ser Ser	Tyr
335	340	345
Phe Gly Phe Pro Asp Pro Lys Leu Phe	Pro Phe Ala Asn Ile	Leu
350	355	360
Thr Thr Asp Phe Pro Ser Phe Phe Cys	Thr Leu Asp Asn Ile	Cys
365	370	375
Pro Val Asn Ile Ser Ala Ser Phe Arg	Arg Lys Gln Pro Gln	Glu
380	385	390
Ala Ala Val Trp Arg Val Gln Ser Pro	Lys Pro Leu Phe Arg	Thr
395	400	405
Gln Leu Lys Thr Leu Phe Arg Ser Tyr	Tyr Ser Val Gln Thr	Ala
410	415	420
Glu Trp Gln Ala His Pro Leu Tyr Gly	Ser Arg Pro Thr Leu	Pro
425	430	435

Arg Phe Ala Leu His Asp Gln Leu Phe Tyr Leu Asn Ala Leu Glu
440 445 450

Trp Ala Ala Ser Ser Val Glu Val Met Ala Val Ala Ala Lys Asn
455 460 465

Val Ala Leu Leu Ala Tyr Asn Arg Trp Tyr Gln Asp Leu Asp Lys
470 475 480

Ile Asp Gln Lys Asp Leu Met His Lys Val Lys Thr Glu Leu
485 490

<210> 140
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 140
gggacgtgct tctacaagaa cag 23

<210> 141
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 141
caggcttaca atgttatgtat cagaca 26

<210> 142
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 142
tattcagagt tttccattgg cagtgccagt t 31

<210> 143
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 143
ggccttgcag acaaccgt 18

<210> 144
<211> 21

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 144
cagactgagg gagatccgag a 21

<210> 145
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 145
gcagatttg aggacagcca cctcca 26

<210> 146
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 146
catcaaggcg ctctacca 18

<210> 147
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 147
cacaaactcg aactgcttct g 21

<210> 148
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 148
cagctgccct tccccaaacca 20

<210> 149
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 149
ggcagagact tccagtcact ga 22

<210> 150
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 150
gcgaagggtg gtgttagata gg 22

<210> 151
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 151
caggccccct tgatctgtac ccca 24